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Psychological Abstracts

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PSYCHOLOGICAL ABSTRACTS

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GENERAL

1867. **Bartlett, F. C. James Ward, 1843–1925.** *Amer. J. Psychol.*, 1925, **36**, 449–453.—*G. J. Rich* (Institute for Juvenile Research).

1868. **Bhattacharya, H. Psychological outlook and philosophy.** *Indian J. Psychol.*, 1926, **1**, 26–31.—Psychology should be divorced from philosophy and both should stand as independent disciplines.—*S. W. Fernberger* (Pennsylvania).

1869. **Bhattacharya, H. The psychologist and his science.** *Indian J. Psychol.*, 1926, **1**, 59–88.—The problem of the relation of mind and body becomes more important as interpretation hinges on the subtler bodily reactions. Many of these reactions are discussed.—*S. W. Fernberger* (Pennsylvania).

1870. **Blake, R. M. The principle of indiscernibles and the principle of individuation.** *Phil. Rev.*, 1927, **36**, 44–57.—Substances are materially and numerically distinct, in addition to their differences of characteristics.—*A. P. Brogan* (Texas).

1871. **Bühler, K. Die Krise der Psychologie.** (The crisis in psychology.) *Kantstud.*, 1926, **31**, 455–526.—The present crisis in psychology is due, not to the criticism of atomistic psychology, but to the development of three different tendencies in psychological work: (1) the experience psychology (Erlebnispsychologie), developed in Germany mainly under the influence of Stumpf and Külpe; (2) behaviorism, which arose mainly in America; and (3) the cultural science (Geisteswissenschaft), which was developed by Wundt and Dilthey, and led to a psychology of personality. The first movement has studied experience on the subjective side. The second has studied the external or observed behavior. The third has studied the works of humanity. A study of the psychology of speech (pp. 466–485) shows that psychology must use all three methods. There must be a synthesis of experience psychology, behaviorism, and cultural psychology.—*A. P. Brogan* (Texas).

1872. **Dasgupta, S. Some implications of realism in the Vedanta philosophy.** *Symposion*, 1925, **1**, 94–108.—The last portion of the Vedas, the sacred works of the Hindus, is called collectively the Vedânta. About 200 B.C. Vâdarâyana arranged a summary of these. This is known as the Vedânta Sûtras or the Brahmasûtras. In the 8th century A.D. Śankara wrote a commentary on it. The present article is an account of the elaborations of certain of Śankara's followers.—*P. R. Farnsworth* (Stanford).

1873. **Davies, A. E. Mechanism, meaning and teleology in behavior: A rejoinder.** *Amer. J. Psychol.*, 1926, **37**, 622–628.—*G. J. Rich* (Institute for Juvenile Research).

1874. **Dunkmann, K. Ferdinand Tönnies.** (Ferdinand Tönnies.) *Zsch. f. Völkerpsych. u. Soz.*, 1925, **1**, 374–388.—Appreciation of the life and work of Tönnies on the occasion of his 70th birthday.—*P. Plaut* (Berlin).

1875. **Guthrie, E. R. Purpose and mechanism in psychology.** *J. Phil.*, 1924, **21**, 673–681.—Among most psychologists of the present and the past, learning has been explained in terms of purpose. Purposive explanations are serviceable and valid to a certain point and have had centuries of successful use.

It would arouse hostility in any audience for a psychologist to attempt analysis of mother-love in terms of reflexes and practice. We may act on a pleasure-pain theory of learning, generally with success, for the pleasure-pain theory is in a rough fashion practical. Tendency is in fact a neutral term lying between mechanistic and purposive description and aims at more exact prediction. But absolute prediction will never be reached. The better sort of psychologist is not contented with lack of precision in the matter of laws and principles, and he is the more precise as he is not satisfied with the vague indeterminism of purposive descriptions. There are many psychologists, however, who hold that teleological explanation is fundamental to psychological description. At the same time many are committed to the language of the physical sciences. Purposive explanations leave room for indeterminism and have an initial advantage over mechanistic explanation, but prediction in terms of purpose usually expresses doubt as to outcome. The fact is that there is no hard and fast line between purposive and mechanistic description; but there are degrees of accuracy in description, and explanations must be judged by accuracy in prediction.—*T. R. Garth* (Denver).

1876. **Hughes, P. The biotic center of psychology.** *J. Phil.*, 1927, **24**, 85–95. —So impressive are the purpose and promise of psychology that they dwarf its substantial gains in contrast. The situation is the more seriously exaggerated by the difficulty that comes of trying to show the relations of its various lines of inquiry to its essential purpose. The results obtained by a research are consequently often misinterpreted when they would be applied to the individual life. Note how between 1867 and 1873 Francis Galton proceeded from inquiry into human "genius" to inquiry into all form of human "faculty," starting from a new and distinct type of data—the life-career—and proceeding into a number of subsidiary fields concerning estimation of these life-careers, the constituents of the life-movement, and the conditions, internal and external to the individual, affecting the course of life. This new science, sired by a new purpose in a matrix distinctive in type of data, was thus born. Strangely, the "sages of the East" journey to the halls and laboratories of Lotze, Helmholz, Herbart and Wundt, instead of to the study of Galton, who is almost ignored in histories of psychology. We have been led by the Wundtian tradition to place emphasis on groups of people, instead of following Galton, who derived psychological data from the history of individual lives. The concern with the individual life-movement of the individual is psychology's birthmark, and her special function in an institutionalized world. In conceiving the "logic" of psychology after the Galtonian pattern we concern ourselves with four problems: the data of psychology, which indicate the true center, the essential purpose and method of the science; the need of distinctive concepts and methods referred to the true center of the science; the approach to a theoretical basis supporting the superstructure; and application of the principles and methods to the particular case. The functioning unity of the individual is the bios, or life history as a whole, and begins at about five months with rapport with others about him. The Sterns, Dearborn, Bertrand Russell, and Margaret Shinn have said this does not exist. This is followed by the life of attention by the seventh month, so that the infant of this age enjoys biotic apprehension, communication and rapport. It is characteristic of personal events that they may be described by habit, attitude and disposition. The biotic data then present a sequence of acts of attention. They are integrated into the individual mind. One's history becomes an active history. Galton and Freud illustrate a type of research which is called here biotic or bionomic. James, Ostwald, and Jung point the way to a second type, which would classify persons on physiological or social bases. Medicine advances to a new plane by emphasizing a normal, healthy physical life. The question of normal maturity is the very center of all psychological study. It is supposed that the *Gestalt*

psychology is related to the analytical psychology of Ward or Stout. Room is found for all types of psychology and psychologists, since those claiming to be the whole field are merely branch lines of three main arteries.—*T. R. Garth* (Denver).

1877. **Hughes, P. Theory and practice in psychology.** *J. Phil.*, 1927, **24**, 113–120.—This is the second of three papers. The unity of any living thing exists in its life-movement only and this life-movement can be observed and recorded through the art of narrative and biography. An illustration is found in Miss Shinn's "Biography of a baby," the baby being the life-movement which at first matures and reacts, then stares, looks around, recognizes, anticipates, etc. In all life-movement the individual matures and also adapts, but in human life these are acts of attending after the second week. Life-movement can only observe the acts of attention in their sequence, though of course there are acts which are not attentive. Life-movements or careers have an accumulation of memory, and of observable purpose which may be narrated in a total life-history. These postulates distinguish the data of psychology from that of other sciences. One is especially important to lay down, viz., in the life-movement of others we have something of immediate, intuitive insight. Another essential to psychology is the postulate that acts of attention increasingly refer to a world of interpersonal relationships. Our happiness depends on our relationship to this derived world, our "social universe." The strictly educative process deals directly with the life-career. *Gestalt* psychology deals with configurations and is a study of insights and conditions, and the aims of the *Gestalt* psychologists and the writer are the same. But they pay no attention to those factors within the individual which make up the life-career. From one point of view learning is a matter of conditioning reflexes, and this has been disastrous to education. In testing we are said to measure capacity, intelligence; but these can be tested only through referring them to the life-career of the individual. While the argument of the position that psychology is distinctly normative and ethical flies in the face of current opinion, the present position seems necessary.—*T. R. Garth* (Denver).

1878. **Hughes, P. The normative in psychology and natural science.** *J. Phil.*, 1927, **24**, 148–153.—This is the third of a series of papers on related topics presented by the writer in this journal. He has previously presented psychology as a science centering in the study of life-careers of persons in such biographic narrative as given by Galton, Freud and Wilhelm Stern. In these we have data, concepts, methods, and purposes distinctively psychological. It seems that evaluation is in last analysis in terms of life-careers, and the ethical schools of Buddha, Confucius, Socrates, Jesus and the saints are interpretations of life-careers. Democracy, in terms of Lincoln's life, becomes an ethics. But, according to Dewey, permanence in values comes from social inertia rather than from such unalterable traits as instincts in human nature. All moral principles are capable of becoming obsolete with changing conditions—intelligence in its exercise is the ideal. This is in contrast with the emphasis of William James upon the personal. If we eliminate instincts from psychology there is still the question whether unalterable traits which may serve as a basis of moral principles exist in the individual. Studies of notable lives evaluate those lives in terms of inherent worth, in terms of personal adjustment, of solution of problems of internal conflict. Apart from the theories of instincts and hereditary tendencies in personal adjustment, we have here the basis of a science of ethics or morals. If a society achieves success, it is good, as it achieves this success in personal adjustments through the establishment of symbiotic institutions and customs. Symbiotic relationships in family, political, and social life depend on principles inherent in life-careers. Evil is biotic failure, not only in personal adjustment, but in abandonment of effort. Disbiotic relationships are to be found in pros-

titution, industrial exploitation, anarchistic impulse, and personal disintegration, such as drunkenness, gluttony or psychoses. Of this reconstructed psychology ethics and logic are subsidiary studies.—*T. R. Garth* (Denver).

1879. **Jastrow, J. The reconstruction of psychology.** *Psychol. Rev.*, 1927, **34**, 169–195.—The development and present status of various schools and concepts in psychology are discussed. The leading trends determining the psychology of today are that it has become a practical discipline which makes behavior the central concept of the science, in a larger and different sense of the word behavior from that used by Watson. Practice needs theory for balance, because what is measurable is not *per se* important if, in deciding what to measure and to plot, assumptions are involved which are not critically examined. Several sources are then discussed, showing their importance. Only in our generation has the genetic point of view done justice to the child, from whom we have much to learn as psychologists. There has entered the definite recognition of our psychological past as a significant phase of human history and as a clue to our present-day psyche. Nor has physiological psychology been without its importance for an understanding of many facts. The abnormal, like the genetic, is a nature-made product, and thus authentic and directive; here the emotions are given their due consideration. Freudianism and its offshoots are admirably summed up and what they emphasize clearly pointed out. The picture of reconstruction is not complete until social psychology is given its place; and since its significance appears in the applications of psychology, the paper ends with further consideration of the subject with which it began—the applications of psychology. A final section pays tribute to G. Stanley Hall and his part in the reconstruction of psychology.—*H. Helson* (Kansas).

1880. **Kantor, J. R. The significance of the Gestalt conception of psychology.** *J. Phil.*, 1925, **22**, 234–241.—The term *"Gestalt"* stands for an intellectual movement rather than for a specific psychological idea or doctrine. It belongs also to a particular group of psychologists and their program of experimentation, and again it denotes a theory applicable as a mode of interpretation of psychological work. According to the first, psychic phenomena are structures which cannot be thought of as aggregations of simpler mental states, but as unique existences—a total structure giving character and significance to the elements of which it is constituted. But it is a question if we are not thereby overlooking Wundtian principles of resultants, creative synthesis and psychical relations—laws of heterogeny, since *Gestalten* are made up of elements. It is a question as to how far one variation of mentalistic psychology is more valuable than another, since both deal with a subject-matter the existence of which is questionable, perhaps even impossible. The *Gestalt* conception, however, does raise the question of the applicability of any mentalistic conception in experimental psychology. Though not exclusively psychological in character, the movement is of value to psychology for its sponsors, in spite of themselves, are continuing and improving the old mentalistic tradition, though their work is thrown into a new form. If we are to find any novelty in the *Gestalt* position, it is because *Gestalt* experiments are conducted as definite stimulus and response situations, not psychic processes. The value lies in the general scientific method of actual experimentation. The *Gestalt* psychologist's attack upon analysis is not a repudiation of the sensation doctrine merely, for he is a thoroughgoing adherent of the method of synthetic observation. If the reality of the criticism of analytic method is accepted we shall have to reject elementary mentalities presumed to be connected up into a larger structure, and in fact of any kind of mental structure which is part of a larger whole. It is to be concluded, then, that the *Gestalt* psychologists are approaching the organismic or objective attitude. They reject the idea that neural functions constitute units operating as additive

wholes. Thus physiological configurations do not parallel stimuli objects in geometric configurations. This is a break with the physiology of mentalistic structuralism. The *Gestalt* conception has little value in this connection, though it is a significant symptom. In the attack upon sensation, carrying the doctrine to an extreme shows it to be like that of the organismic psychologist. The rejection of the sensation doctrine argues for the importance of the stimulus. The recognition of the rôle of the stimulus object in the psychological event makes for a naturalistic psychology. To insist upon stimulus configuration is to approach closely, if unintentionally, to an objective psychology. In connection with learning, the *Gestalt* movement again is seen to avoid mentalism and to incline toward a naturalistic description of psychological phenomena; but its proponents have not reached a genuinely objective psychology, as is evident from their writings. But it is to be here indicated that the *Gestalt* conception, by means of its methodology, partially approaches an objective position.—*T. R. Garth* (Denver).

1881. **Lamprecht, S. P. Locke's attack upon innate ideas.** *Phil. Rev.*, 1927, **36**, 145–165.—The formulation of the doctrine of innate ideas in England was influenced primarily by theological considerations. It was an argument for natural religion and liberalism. Locke objected to the dogmatism into which the theory fell. He wanted an empirical verification of ideas. Because Locke approached the theory of knowledge from this theological side, he adds to his general theory of knowledge an element of subjectivism and scepticism.—*A. P. Brogan* (Texas).

1882. **Morris, C. W. The concept of the symbol. (I.)** *J. Phil.*, 1927, **24**, 252–262.—It can be seen that the behaviorist and the philosophical solipsist are bedfellows. The behaviorist gives philosophy only a few more years to live. In the present movement of analysis of mind there is a centering around the notion of symbol. A science must have something observable to begin with—colors, sounds, emotions, images, organisms, stones, are all symbols applying to discriminated aspects of experience. As to the behaviorist, are his written words merely the results of his implicit responses or do they refer to actually observed material? Koffka insists that psychology must combine the "from within" with the "from without." Morgan believes that for each life story there is a mind story. But the concept of the symbol cannot be stated merely by the partial self-inclusive view alone or by the self-exclusive view, but only from the total self-inclusive view. The behaviorist view of the symbol, according to such as Watson and Lashley, is that a response that is substitutable for other responses, as "language habit," is a symbol. "Thinking is largely sub-vocal," according to Watson. Weiss frankly admits a "behavioristic solipsism," since knowledge must be reduced to behavior of electron-proton particles. Many difficulties of present theories of mind are seen to be due to the attempt to maintain the mechanico-atomistic conception of nature and to reject the conception of mind as an immaterial entity.—*T. R. Garth* (Denver).

1883. **Morris, C. W. The concept of the symbol (II).** *J. Phil.*, 1927, **24**, 281–291.—If the concept of symbol be not adequately defined from the standpoint of radical introspectionism or radical behaviorism the ground is cleared for an attempt to define it from the standpoint of radical empiricism. Treatments of the symbol frequently fail to develop a notion of the symbol in contradistinction to the substitute stimulus. The treatments of the symbol by Eaton, Hollingworth and Cason are not altogether satisfactory, and perhaps the most thorough treatment is that of Hunter. However, this is not free from ambiguity, due to the use of the term "process" and an inadequate consideration of what the symbol is a symbol of. The writer's former analysis produces this definition of the symbol: "A symbol is any given or experienced substitute that leads to a reinstatement of the original stimulus in a form that is observable only from the

self-inclusive point of view." No treatment of the symbol is possible when it is separated from meaning. Dewey speaks of a "duality of reference." Meaning for purposes of clearness should be limited to "signification" and should not extend to the term "significance." According to Titchener "An idea means another idea . . . if it is that idea's context," but he quickly shifts to a self-exclusive view in saying that it may be carried in "purely physiological terms." The difficulties of Watson with meaning are notorious. But the writer insists that wherever there are meanings there are symbols; they are meaningful substitute stimuli requiring responses. Including and synthesizing partial perspectives must be secured in ascertaining fundamental psychological differences due to different observational perspectives. Separation of the symbol from the substitute stimulus gives an important and new category to psychological and philosophical thought. The concept of symbol would include levels both social and non-social, the former being related genetically to the latter.—*T. R. Garth* (Denver).

1884. **Muenzinger, K. F. Physical and psychological reality.** *Psychol. Rev.*, 1927, **34**, 220–233.—The endeavor to explain all phenomena, including those of psychology, by means of the concepts of physics and chemistry will either show that it is the only adequate way to further our understanding of human nature or it will show its inadequacy and force us to concentrate on a different approach. The present article asks if the approach through natural science holds greater promise than the approach through the interpretation in terms of meaning and purpose. After stating the method and aims of behaviorism it is contrasted with purposive psychology, which has a number of answers to refute the claims of behaviorism. Purposive psychology is scientific in that scientific goals are reached, even though not in the usual fashion. The implications of purposive psychology are then stated in clear-cut terms.—*H. Helson* (Kansas).

1885. **Murphy, A. E. Objective relativism in Dewey and Whitehead.** *Phil. Rev.*, 1927, **36**, 121–144.—The recent writings of John Dewey and A. N. Whitehead offer a new philosophy of great importance. But it involves a sharp break with traditional common sense. It unites two doctrines which have been thought incompatible. (1) The objective facts of the world of nature and of reality are the very "apparent" and relative happenings directly disclosed to us in perception. (2) In spite of (or because of) such objectivity such happenings remain ultimately and inescapably relative. Such relativity is hence an ultimate fact about the objective world. Traditional thought has treated the objects or things as primary, as substantives, and events as characters of objects. The new doctrine transposes this relation. For it the event is substantive, and objects are characters of events. Thus relatedness, in all its complexity and interconnections, is made basic for the objective world. Thus matter and mind are not entities but characters in operation. The world of reality is the very system of events disclosed in direct experience; there is no other. But physical objects are not derived from sense objects. Physical objects are the controls of sense objects. Each is distinct and each belongs in its own way to the one world of events which is indeed disclosed in perception but is by no means exhausted thereby.—*A. P. Brogan* (Texas).

1886. **Muscio, B. A philosopher in search of his soul.** *Australasian J. Psychol. Philos.*, 1926, **4**, 105–110.—Review of Keyserling's "The Travel Diary of a Philosopher."—*S. W. Fernberger* (Pennsylvania).

1887. **Perry, R. B. Philosophy of the recent past.** New York: Scribner's, 1927. Pp. viii + 230. $2.00.—The author presents a general survey of American and European philosophy since 1860. The book contains five parts: the state of philosophy in 1860; naturalism, materialism, and positivism; spiritualism and idealism; vitalism, voluntarism, and pragmatism; and the revival of realism.

There are indications in present day thought that the above distinctions may soon be outgrown. There are also indications that the great phase of philosophy which began with Descartes is drawing to a close. All philosophies have now a great respect for science. They are more coöperative than formerly, and they manifest "a tendency to reject externality and transcendence, and to think in terms of what is called 'experience.'" There is "the tendency in naturalistic circles to conceive the physical world, not as a reality behind the scenes which is known only by inference from its phenomenal appearances, but as a system of these appearances; which now cease to be 'appearances' in the old sense, and become themselves the very substance and tissue of nature." Realism "has become the doctrine that the immediately known is itself a genuine aspect of the independent reality." "Whether this philosophical spirit of the times mark the beginning of an era of eclecticism, or an intellectual war-weariness following the polemics of the nineteenth century, or the lull before a new storm of constructive speculation, no man can at this hour confidently predict."—*W. S. Hunter* (Clark).

1888. **Reichenbach, H. Metaphysik und Naturwissenschaft.** (Metaphysics and natural science.) *Symposion*, 1925, **1**, 158–177.—Metaphysics can learn much from science's manner of work, and from its exactitude and modesty. Three metaphysical problems are mentioned—the reality of the outer world, the freedom of the will, and the so-called life problem. Only the first is discussed in this paper.—*P. R. Farnsworth* (Stanford).

1889. **Rexroad, C. N. A formulation of the practical assumptions underlying psychology.** *Psychol. Rev.*, 1927, **34**, 116–119.—Should not psychology first formulate as clearly as possible its task and its assumptions and determine from these what study is necessitated in carrying out this task? The author proposes a set, and also some definitions of terms employed to describe more clearly the problems of science which use them. Three main assumptions concern the task of psychology, principles of behavior, and the problems of psychology. The definitions are enlightening and useful; among the terms defined are: the human individual, specific structure, environment, stimulus, event, situation, human behavior, reaction, response, act, status, and social status.—*H. Helson* (Kansas).

1890. **Rich, G. J. The control of experimental procedure.** *Amer. J. Psychol.*, 1925, **36**, 466–467.—*G. J. Rich* (Institute for Juvenile Research).

1891. **Schilp, P. A. The "formal problem" of Scheler's sociology of knowledge.** *Phil. Rev.*, 1927, **36**, 101–120.—This is an exposition and criticism of Max Scheler's book, "Die Wissensformen und die Gesellschaft." Scheler offers a sociological theory of knowledge based on the phenomenological philosophy of Edmund Husserl. His three main doctrines are thus formulated: (1) Culture is a social phenomenon. (2) There can be no social phenomena (and therefore no society) without knowledge. That is to say, society is (partly, at least) determined by knowledge relations. (3) Knowledge in its turn is (at least partially) determined by society (and by social phenomena). Scheler distinguishes five spheres of the object of knowledge, all of which are irreducible and equally original data. But the conviction of the reality of society is rooted in us far more deeply than that of the reality of any other object. He distinguishes seven systems of knowledge, from myth to technology, and discusses the psychological bases of some of them. Schilp raises several questions in criticism of Scheler.—*A. P. Brogan* (Texas).

1892. **Sellars, R. W. Why naturalism and not materialism?** *Phil. Rev.*, 1927, **36**, 216–225.—Naturalism is a cosmological theory which identifies nature and reality, and is thus opposed to all forms of supernaturalism, such as absolute idealism, transcendentalism, and theism. But naturalism should be emergent or

evolutionary rather than pragmatic or panpsychic. On the other hand, historical materialism has been wrong in accepting a reductive type of elementary mechanics, epiphenomenalism, the denial of the significance of ideals and values, and emphasis on stuff rather than on organization. For emergent naturalism, consciousness is intrinsic to the functioning organism but cannot be perceived from the outside.—*A. P. Brogan* (Texas).

1893. **Shen, E. Explicit primitives for psychology.** *Phil. Rev.*, **36**, 1927, 253–257.—The mathematical logician separates his undefined terms from his defined terms, and his unproved propositions from his proved propositions. The undefined terms and the unproved propositions are called primitive. The present condition of psychology shows the necessity of using this method. We should have "explicit primitives" which designate the undefined terms and which state the unproved assumptions. Some of the primitive terms for psychology are conscious experience, organism, and reaction. To take motion as a basic term is to ignore the fact that the terms of physics must be defined by psychology. Psychology should adopt the "pure idealism" of C. Ladd-Franklin and neuropsychic correlation as some of its primitive propositions.—*A. P. Brogan* (Texas).

1894. **Spencer, W. W. Our knowledge of other minds.** *J. Phil.*, 1927, **24**, 225–237.—The philosopher is anxious not to underestimate the possibilities of knowledge, and so direct acquaintance with experiences of other minds than our own has great attraction for him. The hypothesis of telepathy now would seem to be grounded on empirical and even experimental evidence, but there is difficulty in seeing the value of this as real evidence that other minds actually exist; for the fact is that if one received thoughts thus transferred from another mind he would never know the thoughts as being those of another. The percipient is not directly acquainted with the other person's mind. If we try to explain the belief in other minds on the basis of instinct, present knowledge about instinct is found to be inadequate for this. A hypothetical instinct to believe in existence of other minds could not be taken as evidence that they really exist. We might do better by explaining the belief in other minds on the basis of acquired associations, but they alone cannot explain this belief. It is a pertinent question to ask: How do we come to assign internal states to others? A mere combination of associations will not suffice for answer. The individual is not indifferent when placed in a social situation, and so there must be an interpretation peculiar to such situations, giving rise to a consciousness of others. The hypothesis that there are other minds arises from acquiring associations between external objects and subjective states. The best logical proof of existence of other minds may be found in the expression of judgment by other individuals, whether in language or otherwise.—*T. R. Garth* (Denver).

1895. **Tolman, E. C. Behaviorism and purpose.** *J. Phil.*, 1925, **22**, 36–41.—The distinction between purpose and mechanism appeared early in the history of philosophic and theologic thought. Though metaphysical dualisms are unfashionable today among psychologists, yet the distinction remains in the form of a working postulate; mind is said to exhibit purpose whereas body does not. In consequence modern psychology looks with suspicion upon behaviorism. But purpose is but an objective aspect of behavior. Wherever objective description of behavior discovers a "persistence-until" character we have what behavior defines as purpose. Whenever it is found necessary to make a statement regarding direction of behavior *toward-which* or *from-which* (meaning toward or from something) there we have purpose. Memory may be conceived as a purely empirical aspect of behavior, for here we have the function of an object toward or from which, say, an animal is moving. Purposiveness appears whenever an end is involved. In agreement with McDougall purpose seems to be to the writer a purely objective aspect of behavior; but it is not, as according to Perry, to be

restricted to learning. Purpose is necessary when we would describe behavior having reference to the position or nature of the goal-object.—*T. R. Garth* (Denver).

1896. **Weiss, A. P. Dr. Davies on "Mechanism, meaning and teleology in behavior."** *Amer. J. Psychol.*, 1926, **37**, 450–459.—*G. J. Rich* (Institute for Juvenile Research).

1897. **Weyl, H. Die heutige Erkenntnislage in der Mathematik.** (The present situation of knowledge in mathematics.) *Symposion*, 1925, **1**, 1–33.—This article has the following divisions: (1) From Anaxagoras to Dedekind; (2) The Quantitative Theoretical Foundation of Mathematics; (3) The Antinomies and Russell's (Bertrand) Stuff; (4) Browver's Intuitive Mathematics; and (5) Hilbert's Symbolic Mathematics.—*P. R. Farnsworth* (Stanford).

1898. **Woodbridge, F. J. E. Behavior.** *J. Phil.*, 1925, **22**, 402–411.—Any attempt to reduce behavior to structure is useless. Structure and behavior appear to be ultimate. Necessity makes things come about as they do, and if we should say which was first, structure or behavior, we should possibly have to say structure. We must dream according to our structure if our dreams are to come true. If we reached the possibilities of structure in highest form, behavior would be free to reach its goal. The dependence of the behavior of things upon the way they are put together is sufficiently proved, it would seem. Without brains we could not think, but to expect a brain to think would appear unreasonable. However, the current science of behavior is not sufficiently aware of its contradiction, and the writer would not be understood as giving comfort to it. Although differences in behavior are defined in terms of differences in structure, specific behavior is dependent on specific structure. Behavior is preeminently a teleological matter, and it might well be called a teleological science. Its distinctions are teleological distinctions. A thing may have the power to do what it does, but this power is not a force resident in it independent of the things to which it reacts. Analysis of structure reveals no reason for behavior. The intelligibility of structure resides in the fact that ends are reached. What structure yields is control. There is no royal road to learning for those who leave structure out of account. Things exist to be controlled for ends through the discovery of their structure.—*T. R. Garth* (Denver).

[See also abstracts 1917, 1939, 2052, 2082.]

SENSATION AND PERCEPTION

1899. **Adler, F. H. The action of atropine in ocular inflammations.** *Arch. Ophth.*, 1926, **55**, 484–500.—*C. W. Darrow* (Institute for Juvenile Research).

1900. **Arnold, J. W. The effect of noise on hearing.** *Science*, 1925, **62**, 182.—*G. J. Rich* (Institute for Juvenile Research).

1901. **Ask, F. Zur Kenntnis der Replantationsfähigkeit des Wirbeltierauges.** (Contribution to the knowledge of the possibility of replantation of the vertebrate eye.) *Acta Ophth.*, 1925, **3**, 12–45.—The writer traces historically the experimentation on replantation from the first successful attempts by R. Pardo in 1906 and describes his own experiments, especially of replantation of eyes in tenches, in which he obtained successful results by gradually lowering the food rations and by putting the fishes on a special diet before operating upon them. Extensive footnote bibliography.—*M. L. Reymert* (Wittenberg).

1902. **Ask, F. A contribution to the question of the frequency of school-myopia in Sweden.** *Acta Ophth.*, 1925, **3**, 108–120.—The writer gives a critical outlook on all earlier investigations of myopia in Sweden and objects to the

theories of Steiger and of Vogt, basing his conclusions on his personal studies as well as on all other available material. Graphic tables of the frequency of myopia among the various groups, percentile tables from 1885, 1897, 1915 of the professions of the fathers of pupils of the higher public schools, together with a complete bibliography elucidate his critical survey.—*M. L. Reymert* (Wittenberg).

1903. **Brawley, F. E. The eyes in brain localization.** *Amer. J. Ophth.*, 1927, **10**, 426–428.—Study of the visual fields in conjunction with other symptoms gives important information concerning possible brain lesions. The author mentions some of the diagnostic signs. Scotoma first dulls then destroys color vision. Lesions in the optic nerve, chiasma, optic tracts, and calcarine fissure affect green first and later red and blue. Pituitary disease generally produces its first effects upon the upper temporal field. Tabes is accompanied by a slowly contracting field; color vision is affected first. Syphilis usually gives rise to a retrobulbar neuritis with good fields, and a central scotoma with poor central vision. Multiple sclerosis generally produces atrophy of the temporal half of the discs, accompanied by nystagmus on extreme outward rotation of the eyes—occasionally with one eye completely blind. The significance of numerous other symptoms is briefly outlined.—*C. W. Darrow* (Institute for Juvenile Research).

1904. **Carmichael, L. A device for the demonstration of apparent movement.** *Amer. J. Psychol.*, 1925, **36**, 446–448.—*G. J. Rich* (Institute for Juvenile Research).

1905. **Dieter, W. Über die subjektiven Farbenempfindungen bei angeborenen Störungen des Farbensinnes.** (On the subjective color sensations in acquired disturbances of the color sense.) *Zsch. f. Sinnesphysiol.*, 1927, **58**, 73–79.—The various forms of color-blindness are briefly characterized and the work on cases with uniocular color disturbances is summarized. The author thinks that persons in whom one eye is trichromatic and the other eye shows some kind of disturbance of the color sense are found more frequently than is usually believed.—*H. Klüver* (Columbia).

1906. **Dimmick, F. L. The "visual perception" of movement vs. the "apprehension" of movement from visual stimuli.** *Amer. J. Psychol.*, 1926, **37**, 461–463.—*G. J. Rich* (Institute for Juvenile Research).

1907. **Granit, R. Über eine Hemmung der Zapfenfunktion durch Stäbchenerregung beim Bewegungsnachbild.** (Concerning an inhibition of the function of the cones through the excitation of the rods in after-images of movement.) *Zsch. f. Sinnesphysiol.*, 1927, **58**, 95–110.—The duration of after-images of seen movement—black and white stripes on the revolving drum of a kymograph, time of exposure 30 sec.—was measured and its relation to the speed and the visual angle of the stimulus object determined. It was found that the duration of the after-image increased with the speed of the stimulus object and that, keeping the size of the stimulus object constant, an increase in the distance from the eye increased the duration of the after-image. Very small visual angles, however, shortened the after-image. The maximal duration was found with a visual angle of about 2.3–3.8°. Granit relates this result to the fact that in an area of about 4°, which includes the fovea and a part of the surrounding area, relatively few rods are found. He advances the theory that "the peripherally situated rods inhibit the development of the central-cone after-image of movement" and that the inhibitory effects of the rods are the greater the more the stimulus object extends peripherally. This would explain the brief duration of after-images when the object is observed at short distances. Granit's theory seems to be confirmed by experiments in which he excluded the alleged rod-cone antagonism by exposing the object peripherally. The fact that a decrease in the visual angle which results from a decrease in the size of the stimulus object leads to inhibitory

effects which differ from those obtained by increasing the distance of observation is explained by reference to apparent size.—*H. Klüver* (Columbia).

1908. **Greb, W. Tachistoskopische Untersuchungen über die Wahrnehmung rasch bewegter Objekte.** (Tachistoscopic investigations on the perception of rapidly moved objects.) *Zsch. f. Psychol.*, 1927, **102**, 107–146.—The author wants to throw some light on some of the phenomena observed in viewing rapidly moved objects. If a moving black vertical line was exposed tachistoscopically—speed 17 cm. per sec., distance from the eye 1.5 m, time of exposure 80–100σ—the black line was not only followed by one or two gray parallel lines, but also preceded by gray lines. The lines following the objective line as well as the "precursors" could also be observed when colored stimuli were used. When a red-orange stimulus line was exposed, a subject for instance saw "first a black stripe, then separated by white intervals of 2 mm.: gray-green—dark red, almost brown—red-orange (the object)—yellow—white—green." In trying to explain such phenomena Greb refers to previous studies on after-images of briefly exposed stationary and moving objects, and compares his observations with recent similar observations by Ehrenstein, Gehrcke and Lau. Under certain conditions for instance the observation of a black rotating disc on which there is a white cross shows a white figure with 5 or 6 instead of 4 arms (Gehrcke and Lau). In Greb's experiments figures and forms of various kinds on rotating discs were observed with or without the tachistoscope. The author inclines to the view that the observed increase in figural elements is to be traced back to after-images. The qualitative observations are supplemented by quantitative investigations.—*H. Klüver* (Columbia).

1909. **Griscom, J. M., & Monroe, M. M. Visual field studies in a case of optic neuritis secondary to sinus disease.** *Arch. Ophth.*, 1927, **56**, 244–248.—The optic nerve is in most cases separated from the posterior ethmoids by only a thin partition of bone, and in some instances it may pass through them. Inflammation of the sinuses, therefore, may easily cause a disturbance of vision. A case is cited in which a restricted visual field for form and color vision assisted in the diagnosis of a sinus infection, and in which the field of vision was markedly improved following removal of the inflammation.—*C. W. Darrow* (Institute for Juvenile Research).

1910. **Grönholm, V. The occurrence of trachoma in Finland formerly and at present.** *Acta Ophth.*, 1925, **3**, 1–12.—Through official reports to medical authorities in Stockholm, delivered by doctors practicing in Finland, during the latter part of the 18th century, as well as through available patient-material and on the basis of several *enquêtes*, the writer traces the frequency of defective eyesight in Finland for a period of more than 150 years, and finds the conditions, from having resembled those of darkest Egypt, gradually improving so as to become worthy of a civilized country. The smoke from the open fires and from the wooden torches used for illuminating the chimneyless dwellings in the early period made the average Finn unable to read at the age of about thirty or forty, and at fifty his eyesight was so impaired that he was very often unable to work on his farm. Tables showing results of examinations in 1908, repeated in 1924, in schools, factories, prisons, and workhouses, and maps showing the distribution of trachoma in Finland in 1908 and 1924 show the general improvement. Trachoma in Finland has at all times been more frequent in women than in men, this being apparent even in school children. The disease is most frequent in old women. Most of the material was gathered at the Ophthalmic Clinic in Helsingfors.—*M. L. Reymert* (Wittenberg).

1911. **Gulliksen, H. The influence of occupation upon the perception of time.** *J. Exper. Psychol.*, 1927, **10**, 52–59.—A study of the influence of various occupations (relaxation, holding arms extended in order to produce fatigue,

listening to slow metronome, to rapid metronome, holding the palm on a thumb-tack, reading from the reflection in a mirror, taking dictation, doing problems in division) upon estimation of a period of 200 sec. by 326 subjects. The first 5 situations above were overestimated, and the last 3 were underestimated. From statistical treatment the writer concludes that the actual differences between the situations are even more significant than the differences obtained. Women tended to estimate durations longer than did men, but the differences in respect to variability are not so marked.—*F. A. Pattie* (Harvard).

1912. **Heine, L. Angeborene Gesichtsfelddefekte (Amotio, Glaukom, Embolie vortäuschend).** (Congenital defects in the visual field (simulating retinal detachment, glaucoma, emboly).) *Arch. f. Augenhk.*, 1927, **98**, 108–120.—Twelve cases of inborn optical defects which simulate optical diseases such as those mentioned in the title are discussed in some detail. Six diagrams of organic defects and ten of visual fields showing loci of scotomata are included.—*S. M. Newhall* (Yale).

1913. **Heinonen, O. Über Schielen and Konstitution.** (On cross-eyedness and constitution.) *Acta Ophth.*, 1925, **3**, 78–92.—Based on material from the public school polyclinic in Åbo, Finland, for the years 1908 to 1925, the writer compares 100 cross-eyed children with children having astigmatism and myopia as well as with children having normal eyes, in regard to physical measurements, nutrition, nervous symptoms, etc., and arrives at the following general conclusion: "The cross-eyed children show definite inferiority in regard to physical build, general state of nutrition, death rate, etc., as compared both with those of normal vision and those of refraction defects, and on the whole a greater variability." Thus, for instance, the 100 cross-eyed children show 9% "signs of degeneration" while the normal have a percentage of .6 only. Nervous symptoms were apparent in 18% of the cross-eyed as against 8.7% of the children of normal vision. Tables in text and bibliography.—*M. L. Reymert* (Wittenberg).

1914. **Hertel, E. Stillings Pseudo-isochromatische Tafeln zur Prüfung des Farbensinn.** (Pseudo-isochromatic plates to test color vision.) Leipzig: Geo. Thieme, 1926. Reviewed, A. K., *Arch. Ophth.*, 1927, **56**, 312.—Reviewer notes changes in plates VI and VIII, with new plates in groups XI and XII. "The improvements introduced in this edition are welcome changes."—*C. W. Darrow* (Institute for Juvenile Research).

1915. **Hiecke, R. Neue Folgerungen aus den Farbenempfindungskurven von A. König und C. Dieterici.** (Further conclusions from the color sensation curves of A. König and C. Dieterici.) *Zsch. f. Sinnesphysiol.*, 1927, **58**, 111–131.—The Young-Helmholtz and Hering theories are briefly summarized and a modification of the Hering theory is suggested. The author attempts to show that the results of Arthur König and Conrad Dieterici, who tried to determine the elementary sensation curves of the human eye on the basis of the Young-Helmholtz theory, may also be used to support a modified Hering theory. The difficulties involved in the theory of Young and Helmholtz as well as of Hering are pointed out. As regards theories of nerve stimulation, Hiecke thinks that the facts suggest a photochemical rather than a photoelectrical explanation.—*H. Klüver* (Columbia).

1916. **Higginson, G. D. The visual perception of movement.** *Amer. J. Psychol.*, 1926, **37**, 629–631.—*G. J. Rich* (Institute for Juvenile Research).

1917. **Laker, K. Der Tonbausteinschieber.** (The tonal interval slide rule.) *Zsch. f. Sinnesphysiol.*, 1927, **58**, 80–87.—The author, who is also responsible for a "transposition watch" and an "overtone slide rule" describes here an instrument for the demonstration of acoustic and musical relations and laws. He believes that this instrument is not only very useful for the teacher of acoustics and harmony but also of definite value in scientific work.—*H. Klüver* (Columbia).

1918. **Luckiesh, M. General considerations and definitions of glare and visibility.** *Trans. Illum. Eng. Soc.*, 1927, **22**, 542–546.—An attempt to clarify terminology. Contains brief discussion of the causes and effects of glare and visibility; methods of appraisal of glare and visibility; and definitions of visibility, glare, veiling, contrast-sensitivity, safety-factor of visual contrasts, etc.—*G. Rand* (Bryn Mawr).

1919. **Mayer, B. Über die Ortsbestimmung von reinen Schmerzempfindungen.** (On the localization of pure pain sensation.) *Zsch. f. Sinnesphysiol.*, 1926, **58**, 32–37.—In an area of 50 cm.^{2} on the volar surface of the left lower arm, pure pressure and pain sensations as well as pressure sensations followed by pain were elicited. Both Weber's and Volkmann's methods of localizing the stimulated area were used. A correct localization is more easily achieved after pressure than after pain, but still more easily after a "complex sensation" of pressure and pain.—*H. Klüver* (Columbia).

1920. **Newhall, S. M., & Dodge, R. Colored after-images from unperceived weak chromatic stimulation.** *J. Exper. Psychol.*, 1927, **10**, 1–17.—The subjects fixated the center of an illuminated field of 1.8° visual angle, into which chroma was introduced in varying amounts and at different rates without change of brightness. The principal feature of the apparatus was a revolving color disc providing an arithmetical increase of chroma from a neutral zone at the center to a neutral zone at the periphery, which moved behind the aperture of 1.8° on a track perpendicular to the line of vision. A lens in the aperture furnished a magnified image of 1 sq. mm. of disc. Preliminary work led to rejection of all colors but the Hering red (No. 1). Two principal rates of change of chroma were used: fast, approximately 75° per sec., and slow, 0.6° per sec. "Negative after-images usually did not result from unperceived color stimulation when the color stimulation was both introduced and withdrawn at the same rapid rate." "Negative after-images frequently resulted from unperceived color stimulation when the lack of color perception was a result of an adaptation attained by slowly increasing definitely subliminal stimulation, and the appearance of the after-images was favored by suddenly withdrawing the stimulus color." If the stimulus color was introduced rapidly and withdrawn slowly, it could be seen without negative after-images. The simple limens of color stimuli and of after-images, expressed in degrees of color on the disc and computed by the constant process, "appear inversely related to the rate of introduction or withdrawal of the stimulus color."—*F. A. Pattie* (Harvard).

1921. **Rand, G., & Ferree, C. E. Effect of size and shape of stimulus on size and shape of color fields.** *Amer. J. Ophth.*, 1927, **10**, 399–412.—"Color fields were charted under fixed conditions of illumination, background, pre-exposure of the eye, and standard colors, the stimulus in the different tests varying in size so as to subtend angles of 2, 1, 0.5, and 0.17 degrees. It is found the size of the stimulus comes next in importance to its intensity in determining the boundary of the field. For red and blue the large stimulus carried boundary almost to that of the field of vision. The effect of size of stimulus and other variable factors is greater for pathologic than for normal eyes, and varies for different colors." Fourteen figures.—*C. W. Darrow* (Institute for Juvenile Research).

1922. **Schumann, F. Neue Untersuchungen über die Zöllnerschen anorthoskopischen Zerrbilder. III. Volk, J. Tachistoskopische Untersuchungen.** (New investigations on Zöllner's anorthoscopic distortion-images. III. Tachistoscopic investigations.) *Zsch. f. Psychol.*, 1927, **102**, 57–106.—Different figures appearing behind a slit were observed tachistoscopically and the phenomenal changes were recorded. Whereas Wenzel (*Zsch. f. Psychol.*, **100**) had experimented with slowly moving figures, Volk was interested in the effect of the two edges of a slit on rapidly moving objects. The appearance and disappearance

of a circular line of 12 mm. diameter and 1 mm. width behind the straight edge of a slit was studied. The width of the slit and the speed with which the circle was moved were varied and the resulting conformational changes and phenomena of movement of the different segments of the circle were recorded. In another series of experiments a straight line forming an angle of 45° with the slit was used. The chief result was that an already present contour has a definite influence on the "consolidation" of new contours. In the case for instance of a circle appearing behind an edge, the circular contour seems to be flattened or it can not be seen at all, and only a phenomenon of movement is perceived during the initial stages of the exposure. During the following stages the contour seems to stick to the edge and the circle becomes lengthened. The difference between the phenomenal changes which are observed in rigid fixation and those which appear when the eyes follow the stimulus object was studied. The results obtained on the straight edges were confirmed by observations on figures appearing or disappearing behind curved edges; Volk used for instance rectangles approaching semi-circular edges. It was found that that contour of a figure which disappeared first behind the curved edge became similar to the form of this edge, and that that contour which disappeared last was influenced by the form of the edge behind which the figure appeared.—*H. Klüver* (Columbia).

1923. **van Heuven, J. A. La vision binoculaire.** (Binocular vision.) *Arch. néerl. de physiol.*, 1926, **11**, 83–120.—The author's experimental findings support the theory of H. Smellen, Jr., to the effect that cooperation of the two eyes is conditioned by the state of attention. A striking illustration of this is afforded by the curve of fusion of images of the two eyes under conditions of concentrated and dispersed attention. The attention is the chief regulator of the ocular reflex adjustments; it corrects for the irregularities of structure and imperfections of ocular adjustments in vision, and, under normal conditions, keeps these imperfections from becoming conscious. When the stimulus does not fall directly on the fovea but in its immediate neighborhood the attention corrects this error and produces a correct collaboration. If the error is large a more lively state of attention is required to produce perfect fusion of the images. On the other hand, when the image falls far out in the periphery of one eye, or the eyes are under the influence of totally different stimuli, the tendency to collaboration does not exist; and hence the two objects are not seen as one. Attention is alternately directed wholly to one and then wholly to the other. Such a condition obtains when one looks into the microscope or opthalmoscope without closing the unused eye. Likewise this condition prevails in a relatively severe case of strabismus.—*C. P. Stone* (Stanford).

1924. **von Hofe, K., & Perwitzschky, R. Pupille und Mittelohr.** (Pupil and middle ear.) *Arch. f. Augenhk.*, 1927, **98**, 181–183.—Prior studies of cats and dogs indicate that postganglionic fibers controlling pupillary diameter pass through the tympanic cavity on their way to the eye. In human subjects auditory stimulation elicits the so-called otogenic pupillary reflex; both pupils narrow, the one on the side of stimulation first and to the greater extent. If the sympathetic fibers are also present in the human middle ear this pupillary movement may be partly dependent upon them and serve as a symptom of their presence and condition. One hundred subjects, some of whom had lesions of the middle ear, were tested to see whether there would be more pupillary inequality in the abnormal cases. The results being negative, no dependency of the pupillary action on sympathetic fibres in the human middle ear could be affirmed and, also, pupillary inequality could not be taken as a symptom of middle ear lesion.—*S. M. Newhall* (Yale).

1925. **von Skramlik, E. Zur Frage der Lokalisation von Schmerzempfindungen.** (On the question of the localization of pain sensation.) *Zsch.*

f. Sinnesphysiol., 1926, **58**, 28–31.—B. Mayer, working under von Skramlik, found that pain stimuli on the skin were more inexactly localized than pressure stimuli. In 1911, Ponzo had found just the opposite. Von Skramlik does not accept Ponzo's explanation that the different results can be traced back to a difference in method. Mayer had adopted Volkmann's method of pointing at the stimulated area without previous searching or touching; Ponzo had used Weber's method of searching with a special rod. The author points out that Mayer recently confirmed her previous results, using the method of Volkmann as well as that of Weber. In both cases she found that pure pain stimuli could not be localized as well as pressure stimuli.—*H. Klüver* (Columbia).

[See also abstracts 1979, 2023, 2056, 2064.]

FEELING AND EMOTION

1926. **Jörgensen, C. En invalidiserende stemningsanomali.** (Psychopathia tristo-morosa.) Bibliotek for Lager, 1926, 240–256.—The writer—who in 1920 published his own original theory of feeling and emotion in book form in Danish: "Fölelseslivets grundelementer" ("The basic elements of emotional life"), the main thesis being that "pleasantness and unpleasantness denote border phenomena between states of feeling and states of volition"—in this treatise offers a minute and detailed case history of psychopathia tristo-morosa which seem to support his theory. References are included in the text. See also the writer's treatise: "Hvad er lyst og ulyst?" ("What is pleasantness and unpleasantness?") *Svensk arkiv för psychologi och pedagogik*, 1923, 113–126.—*M. L. Reymert* (Wittenberg).

1927. **Weber, C. O. Theories of affection and aesthetics of visual form.** *Psychol. Rev.*, 1927, **34**, 206–219.—The author states the Moore theory of affection, which has been extended to all sorts of pleasurable appreciations, and gives the experimental results of his test of it. Then follows an examination of various theories of the aesthetic, with an attempt to exhibit the potent manner in which the Moore theory embodies the basic contentions of such various students as Lipps, Langfeld, Troland and others. Thirdly, this theory is presented as a solution for many predicaments which surround aesthetics in its philosophical aspects.—*H. Helson* (Kansas).

[See also abstracts 1947, 2047.]

ATTENTION, MEMORY AND THOUGHT

1928. **Cason, H., & Cason, E. B. Association tendencies and learning ability.** *J. Exper. Psychol.*, 1925, **8**, 167–189.—The Kent-Rosanoff free association test and a test for ability to learn practically meaningless material were given to 100 subjects. "The correlations between the individuality of response and speed of reaction to the Kent-Rosanoff words for individual subjects range from —.11 to —.59, with an average of —.33 ± .06. If the subject's reaction is delayed, responses which are more and more foreign to the original stimulus word are formed, and his response has less probability of being a common one. . . . There is a negative correlation between the *average* individuality of response and the *average* speed of reaction to the Kent-Rosanoff words for a group of subjects. If responses with frequencies from 1 to 9 are constant, speed of reaction correlates —.75 with responses with a frequency of 0. If responses with a frequency of 0 are constant, speed of reaction correlates —.82 with responses with frequencies from 1 to 9. A subject who is quick in reacting is therefore more likely

to give common responses than one who reacts slowly. . . . The sex of the experimenter affects the subjects' performance on the Kent-Rosanoff and learning tests."—*H. Cason* (Rochester).

1929. **Dallenbach, K. M. Dr. Johnson on the measurement of attention.** *Amer. J. Psychol.*, 1926, **37**, 149–154.—*G. J. Rich* (Institute for Juvenile Research).

1930. **Dodge, R. Note on Professor Thorndike's experiment.** *Psychol. Rev.*, 1927, **34**, 237–240.—Comments on experiments made by Thorndike to answer the question: Does the associative process furnish any evidence of a barrier against immediate repetition that can be identified with refractory phase? Thorndike's results (see abstract of Thorndike's article: The refractory phase in associative processes, No. 1935) and similar phenomena are discussed and interpreted in the light of the refractory phase hypothesis.—*H. Helson* (Kansas).

1931. **Jaensch, E. R. Über Eidetik und die typologische Forschungsmethode.** (On eideticism and the typological method of research.) *Zsch. f. Psychol.*, 1927, **102**, 35–56.—Jaensch defends his eidetic research against the "fruitless criticism" of the *Gestalt* psychologists, especially of Koffka. He points out that Koffka's results concerning the influence of the experimental setting on the after-image were previously demonstrated in the Marburg studies and that the enormous individual differences in the behavior of after-images can be explained only by reference to different types of personality. After-images must be studied with reference to the laws of eidetic imagery; whether or not an after-image will show enormous deviations from the "normal" after-image of sensory physiology depends on the type to which the person belongs. Jaensch tries to show that the methods of his opponents were inexact and applied only to a very limited number of cases; and that, furthermore, any attempt to check the Marburg results must take into account the various findings of sensory physiology and sensory psychology and the experimental studies on personality. He considers *Gestalt* psychology as a kind of atomistic psychology which unduly neglects the genetic approach.—*H. Klüver* (Columbia).

1932. **Perkins, N. L. Human reactions in a maze of fixed orientation.** *Comp. Psychol. Monog.*, 1927, **4**, No. 21. Pp. 92.—The purpose of the study was to investigate exhaustively the process of learning in a pencil maze with fixed orientation in order to determine whether any conclusions could be drawn in regard to the method of attack, the order of dropping errors, and the psychological processes entering into the learning. The study was divided into two parts: (1) learning a maze sufficiently difficult to constitute a real problem for adult subjects, giving an opportunity for concentrated effort over a comparatively long period, and (2) modification of the original experience to determine the behavior characteristic of the reactions to similar situations in which there are certain fundamental changes. The apparatus used consisted in nine special labyrinths drawn on paper. The mazes were placed on a table with a glass top under which were electric lights, dark curtains cutting off all light except that under the maze. The subjects traced the path with a paste-board tracing tube to which was attached a square piece of paste-board making possible vision of only a small part of the maze. The subjects were 75 men and women elementary and graduate psychology students. In the study of physical characters, no definite relations could be shown to exist except in the case of the first and last two blinds, which were the first to be eliminated, since the effect of all factors were obscured by "direction." Direction was shown to be the dominant factor which determined the diminution of errors as well as the relation of frequency to the learning process. The process seemed to be positive rather than negative, in that the subject learned to select the true path rather than to avoid blinds. The backward-running errors were less frequent than the forward-running and were eliminated

earlier. In learning modifications of the original maze, the subjects appreciated differences almost immediately and there was little confusion in the old sections. Modification of the middle area offered the greatest difficulty. The writer states that the study clearly demonstrates that the maze with fixed orientation offers quite a different problem from that of the animal maze where there is little if any fixed orientation. Modification of some of the conclusions in regard to human reactions in a maze was suggested, since the factor of orientation has not usually been considered.—*C. J. Warden* (Columbia).

1933. **Reed, H. B. The essential laws of learning or association.** *Psychol. Rev.* 1927, **34**, 107–115.—The author assumes that the laws of learning and the laws of association are the same. Learning problems resolve into the laws of the formation of connections, the strength of connections, and the elimination of false reactions—thus learning is amenable to the laws of association. The essential truths of the old laws of contiguity and similarity can be made to cover the whole range of acquired reactions by restating them in more general form. But the author recognizes that these laws seem inadequate to account for new adaptations to complex stimuli, purposive thought, or the fact that meaningful materials are learned with greater ease than meaningless, and proposes a new law, namely, that man learns by perceiving relationships. As regards the problem of the strength of connections, an abundance of evidence supports the opinion that the law of exercise with its sub-laws of frequency, recency, and intensity is fundamental. Emotional congruity had better be regarded as a special kind of set, and set as a general neural trend that controls the operation of all the laws with respect to adaptability. The law of effect is probably necessary to explain the elimination of useless movements.—*H. Helson* (Kansas).

1934. **Seibert, L. C. An experiment in learning French vocabulary.** *J. Educ. Psychol.*, 1927, **18**, 294–309.—Three methods of studying French vocabulary—(a) studying silently, (b) studying aloud, (c) studying aloud with written recall—were tried out upon 81 students who constituted three sections of a French class. The vocabulary, as far as possible, was selected so that the words were unknown to the subjects, who had already studied French for one year. A series of words was learned by each method named above, then relearned after an interval of two days, ten days, and forty-two days. For the first learning, method C was slightly superior to the others. Methods B and C are decidedly superior for relearning. For accuracy, the learning aloud is best, and method B is better than C. Students who do well in one method do well in the others (r about .60). The correlation between time and accuracy is negative.—*A. M. Jordan* (North Carolina).

1935. **Thorndike, E. L. The refractory period in associative processes.** *Psychol. Rev.*, 1927, **34**, 234–236.—Subjects were asked to write a number after hearing a word. Some words were repeated and the experiment was designed to discover if the same number was also repeated. The avoidance of sequences in number responses seems to involve something more complex than refractory period. While these experiments are felt to be inconclusive by the author, he suggests that it should be possible to devise experiments in which the avoidance of sequences would be a fairly crucial test of the existence and influence of a refractory phase in the associative process.—*H. Helson* (Kansas).

1936. **Tsai, L. S. The relation of retention to the distribution of relearning.** *J. Exper. Psychol.*, 1927, **10**, 30–39.—Experiments to test the inference made by several authorities that, since the rate of forgetting is very rapid at first and more gradual later on, relearning of a given material should come more frequently at first and at longer intervals later. Paired associates were used; the curve of retention for this material showed negative acceleration. 72 subjects, divided into 3 groups, learned and relearned the material in 9 trials distributed

over 11 days. All groups had 3 trials on the 1st day: Group A had 5 relearnings separated by negatively accelerated intervals (relearning was on the 1st, 2d, 3d, 4th, 7th, 11th days); Group B had them at positively accelerated intervals (1st, 5th, 8th, 9th, 10th, 11th); Group C had them throughout on alternate days. On the 14th and 18th days aided recalls were made, and it was found that retention was best in A and poorest in C. In another experiment under very similar conditions learning was most efficient when distributed according to negatively accelerated intervals and least efficient if the intervals were not accelerated (*i.e.*, on alternate days), while distribution according to positively accelerated intervals gave intermediate efficiency.—*F. A. Pattie* (Harvard).

1937. **Uhrbrock, R. S. Interest as an indication of ability.** *J. Appl. Psychol.*, 1926, **10**, 487–501.—The aims of this study were (1) to determine for a group of college men the relative proportions interested in (a) things, (b) people, and (c) ideas; and (2) to discover whether interest may be considered as an indication of ability. A group of 253 male students, for whom scores on the Thorndike Intelligence Examination for High School Graduates were available, were asked to indicate on mimeographed slips their general line of interest according to the above classification. Of this group 125 voluntarily completed the Stenquist Mechanical Aptitude Test No. 1. The results show that 107 men expressed an interest in things; 94 in people; and 52 in ideas. The mean scores on the two tests given are different for these three groups, but these differences, on the whole, are shown not to be very reliable. However, they may indicate general tendencies, and probably should be considered in practical situations. A good summary of earlier work along this line and a list of references are given.—*B. M. Morrison* (Kansas).

1938. **Winch, W. H. Can observation be trained in school children?** *J. Educ. Res.*, 1927, **15**, 314–326.—Continuation of the experiment reported in the preceding number. Additional experiments with more children are reported in accordance with the same general plan. The author concludes that it is possible to train children to better their observation even of the things which they are used to seeing about them. Certain pedagogical inferences are pointed out.—*S. W. Fernberger* (Pennsylvania).

[See also abstracts 1991, 2048.]

NERVOUS SYSTEM

1939. **Bleuler, E. Die Lokalisation der Psyche.** (The localization of the mind.) *Allg. Zsch. f. Psychiat.*, 1924, **80**, 305–311.—B. makes a distinction between the purely intellectual functions and the "world of instincts, impulses, emotions, and the will," of the "energy" as he proposes to say. He thinks that indications of energy can be observed in a person with brain-stem missing, and that moreover a "combination of affectivity and impulses is indisputably connected with the fore-brain." In contrast with this the intellectual functions are a new acquisition which has come into existence with the cerebral cortex and which has developed uniformly with it. Thus the cortex is the organ of the intellectual and, according to accepted values, the highest functions of the mind. Upon its function depends at the same time "the conscious quality of the mind"; this is "localized" in the cortical functions essentially. B. proposes to show on these grounds that "the mind, the soul, the self, is localized in part in the stem and in part in the cortex." He considers the exclusive localization of all psychic "energy" in the stem as improbable, and "provisionally" concedes its activity to the cortex as well. One may think that the "cortex finds an elementary intensifying of the emotions in the lower centers, which for their part set in motion

all the mechanisms which diminish or increase the activity in the direction specified by the cortex (internal and external emotional effect)." A "psychoid" localized in the entire body is involved in primitive forms of life, and it governs the structure, the development, and the functions of the body. The nervous system, as it develops, takes over the reflexes and instincts the germs of which were already contained in the "psychoid," and controls yet many other functions (trophic nerves). The "psychoid" functions further as the "element determining the structure and physiology of the body." Finally with the development of the cortex the "remembered personal experience" comes into action accompanied by the quality of consciousness.—*Th. Ziehen* (Halle a/S.).

1940. **Hoenig-Siedersleben, C. Die Ableitung der Besonderheiten der Traumpsyche aus einer Zustandsänderung des schlafenden Gehirnes.** (The derivation of the peculiarities of the dream mind from a changed condition in the brain during sleep.) *Allg. Zsch. f. Psychiat.*, 1924, **80**, 85–101.—The changed condition accepted by the author consists of: (1) the extinction of the stimuli pressing upon the sensory centers from the periphery; (2) the arising of autotonic or associative excitations in the sensory centers from which genuine sensory illusions originate; (3) the deficient associative activity; (4) deficient transmission of the volitional impulse. A unified comprehension of these four components is not attempted.—*Th. Ziehen* (Halle a/S.).

1941. **Müller, L. R. Beziehungen des Sympathikus zum Vagus.** (Relations of the sympathetic to the vagus.) *Allg. Zsch. f. Psychiat.*, 1924, **80**, 141–156.—Müller gives a short review of the relations of the sympathetic system to the parasympathetic (i.e. vagus system). He assumes that the sympathetic excitations pass through the anterior roots and that the parasympathetic pass through the posterior roots. The moods are brought about in the vegetative nervous system, according to Müller, while the cerebrum acts upon the centers in the region of the third ventricle. Not only the "life centers" but also the center for the psychic processes are to be localized in the gray matter of the third ventricle.—*Th. Ziehen* (Halle a/S.).

1942. **Penfield, W. G. Cerebral pneumography. Its dangers and uses.** *Arch. Neur. Psychiat.*, 1925, **13**, 580–591.—*D. Shakow* (Boston Psychopathic Hospital).

1943. **Ten Cate, J. Contribution a la physiologie comparée du cervelet, I. Le cervelet du pigeon.** (A contribution to the comparative physiology of the cerebellum. I. The cerebellum of the pigeon.) *Arch. néerl. de physiol.*, 1926, **11**, 1–82.—A technical paper dealing with the literature of the gross anatomy, histological structure, and functions of the cerebellum as a whole in birds in general and the pigeon in particular. This includes an account of personal researches on the pigeon embracing operative lesions and subsequent microscopic examinations of the sectioned cerebelli. The data covers a scope that is too broad for brief summary. 29 figures; bibliography of 45 titles.—*C. P. Stone* (Stanford).

1944. **Tiegs, O. W. A further note on the structure of the nervous junctions of the spinal cord.** *Austral. J. Exper. Biol. & Med. Sci.*, 1927, **4**, 25–30.—The author states that "a branching collateral may usually be recognized by the fact that at the point of branching there is a small triangular piece of protoplasm, and this piece of protoplasm is so located, also, that it enables us to recognize the direction in which the fibre is travelling." By the use of this method, the author has endeavored to find collaterals which could be traced into the cell dendrites. The author states that he has succeeded in doing this in some instances. From this direct observation, he concludes that the predominant type of nervous junction in the spinal cord is a direct junction via the cell dendrites. The writer also states that he has been able to observe neurofibrils in unstained,

apparently living, nerve tissue, and concludes that they are, therefore, not artefacts produced by coagulation.—*J. R. Liggett* (Clark).

1945. **Weil, A. The form of the anterior horn cells of vertebrates.** *Arch. Neur. & Psychiat.*, 1927, **17**, 783–793.—(1) The cervical anterior horn cells of the spinal cord of vertebrates are more voluminous than the cells in the dorsal segments. (2) The form of the dorsal cells is more elongated than that of the cells in the cervical segments. (3) Similar to the ontogenetic elongation of the motor cells of the spinal cord in man, there is a corresponding situation in the phylogenetic scale of vertebrates. The relation of the longitudinal (caudocranial) to the transverse diameter of the cells in the dorsal segments increases gradually in favor of the longitudinal diameter, until in man the latter is finally three times as long as the transverse diameter. (4) The sequence in this process of elongation of the anterior horn cells of vertebrates is: Amphibia, Reptilia, Pisces, Aves, Carnivora, Rodentia, man.—*I. Rappoport* (Boston Psychopathic Hospital).

[See also abstracts 1903, 1924, 2003, 2007, 2025.]

MOTOR PHENOMENA AND ACTION

1946. **Atwell, W. J., & Woodworth, E. A. The relative volumes of the three epithelial parts of the hypophysis cerebri.** *Anat. Rec.*, 1926, **33**, 377–385.—A preliminary study of the relative volumes of the three parts of the hypophysis cerebri (pituitary gland).—*H. R. Laslett* (Whitman).

1947. **Boenninghaus, G. Über das Versagen der labyrinthogenen statischen Kompensation im Affekt.** (Concerning the failure of labyrinthogenic static compensation in emotion.) *Monatsschr. f. Ohrenhk.*, 1926, **60**, 1139–1144.—Following unilateral injury to the vestibular mechanism the disturbance of behavior is ordinarily soon compensated. Under strong emotion, however, this adjustment does not always occur. It is suggested that this failure is analogous to other cases of dysfunction (aphasia, for instance) following emotional excitation. —*C. W. Darrow* (Institute for Juvenile Research).

1948. **Crawley, S. L. An experimental investigation of recovery from work.** *Arch. Psychol.*, 1926, **13**, No. 85. Pp. 66.—A survey of experimental studies in fatigue is presented. Emphasis is placed upon certain conditions that would directly influence the technique of the author's investigation. These were "attitudes" governed by the subjects and those that could be mechanically controlled through the plan of procedure. The author's problem assumed that the effects of a task would have sufficient duration so that this would influence activity carried out in the interval normally spent in recuperation. By exercising an organism, then allowing a short interval of rest, and afterward having a second standard task performed, effects of variation in the first should show in the second, granted that the rest interval was not too long to smooth out any local fatigue irregularities. The program consisted of a task, a rest, a second (standard) task. The subjects were four men. The experimenter used and demonstrated the instructions to each subject. Each work period was carried to actual exhaustion. The apparatus for both arm and leg experiments was a modified form of the simple chest-weight apparatus. Each experimental session consisted of two work periods with a controlled rest period between. The second period was kept constant throughout the experiment. In the series of arm records the second task was always performed with a fifteen pound weight to the point of exhaustion. The conditions measured were (1) general arm performance as compared with leg performance, (2) in the arm experiments, the effects of 10, 15, 20 pound weights lifted in the first work period, (3) in the leg experiments,

the effects of 30, 35, 40 pound weights lifted in the first work period, (4) the effect of the two-minute rest period as compared with a four-minute rest period between the two tasks, (5) the effects of incentive in the first task upon the amount of work produced in the second. Two general series of experiments were taken using combinations of factors. In the first series no incentive was applied to the first work period except "go to exhaustion." In the second series "self-competition" was introduced as an incentive. Self-competition and visible performance produced greater amount of work. With the extra exertion on the part of the subject in the competition series a noticeable effect on the standard second work period was shown by a decrease in output corresponding to the increase in output in the first series. Differences between the leg and arm experiments are those of quantity rather than of intrinsic peculiarities. There is a progressive decrease in total amount of work done as the size of the weights increase. Recovery from work was greater after a four-minute rest period than after a two-minute rest period.—*E. M. Achilles* (Columbia).

1949. **Dunlap, K. The short-circuiting of conscious responses.** *J. Phil.*, 1927, **24**, 263–267.—The writer disowns responsibility for a theory of short-circuiting which claims that "muscular contractions primarily responsible for the serial connection of a sequence of reactions may be eliminated and yet the serial connection of the neural 'reflexes' be retained by transmission of efferent current of one response through the muscle cells directly to the neural receptors terminating in a muscle spindle, thus initiating a second response, without stimulating the muscle cells to contraction." On the other hand, the basis of his original hypothesis is the assumption that perceptual process is a reaction initiated in receptors, communicated in a afferent-efferent discharge, a transit through the central nervous system and eventuating in action by effectors. To this should be added that the thinking process is a response eventuating in the same muscle-pattern as that of the corresponding perceiving process, but it is initiated by receptors other than those initiating the corresponding perceiving process. A thought-response may follow a perceptual process without muscular activity. In typical perceptual responses there is an efferent discharge from the cerebrum both to muscles and to the cerebellum, and there is a corresponding development and fixation of cerebellar patterns for the developed muscle patterns. If there is a discharge from cerebellum back to cerebrum there is the possibility of a response eventuating in certain muscle patterns. It does not seem necessary now to adopt the hypothesis of exclusively cerebellar initiation of thought, though it is well to keep it in view for various reasons. There seem to be no obstacles to the general cerebellar theory from the neurological side, though there may be little positive support for it and real light on the functions of the cerebellum can come only from work on behavior and from operative and pathological cases. Substitution of cerebellar pattern for peripheral or effector pattern of one response and receptor pattern for the next may enlarge somewhat our notion of integration and make it more useful.—*T. R. Garth* (Denver).

1950. **Eagleson, H. E. Periodic changes in blood pressure, muscular coordination and mental efficiency in women.** *Comp. Psychol. Monog.*, 1927, **4**, No. 20. Pp. 65.—The purpose of the experiment was the investigation of changes in blood pressure, muscular coordination and certain types of mental efficiency associated with the menstrual rhythm. Blood pressure was measured by the use of the Tycos spring dial sphygmomanometer with the method of frequent periodic readings. Muscular coordination was measured by the use of the Johns Hopkins circular steadiness plate and the tapping test with double tapping board. Mental efficiency was measured by the Woodworth and Wells color-naming test and the Johns Hopkins substitution test, E-O (symbol sheet), form 3. Four subjects were used; one girl twelve years and eleven months of age, in whom

the menstrual cycle had not yet begun, and three adult females. The results appear to substantiate the hypothesis of a rhythmic variation in circulatory function accompanying the menstrual cycle. There are cyclic variations in at least one strictly "mental" function, namely, the adding of numbers, and in a mental-motor function, namely, the hand-eye coordination in the steadiness test. On the basis of results obtained, the menstrual cycle may be divided into three periods: premenstrual, menstrual, and inter-menstrual. During the premenstrual period of from three to five days there is a variable tendency to a rise in blood pressure, a lessening of steadiness in hand-eye coordination, with lessened efficiency in simple mathematical work. The menstrual period is characterized by an increase in steadiness and efficiency of number work. The latter part of the period is characterized by low blood pressure. In the inter-menstrual period, from the end of the flow to the beginning of the next premenstrual period, the blood pressure is low, rising to normal in most cases during the first week. This period of return to normal showed great efficiency in the tests mentioned. There is a period of heightened blood pressure and lessened steadiness from the fourteenth to eighteenth days after the beginning of the flow. The writer suggests that ovulation and the changes which ensue may account for the rise in blood pressure during the period indicated and for the premenstrual rise. Bibliography of 53 titles.—*C. J. Warden* (Columbia).

1951. **Filter, R. O. Estimates of amount of work one can do.** *J. Appl. Psychol.*, 1927, **11**, 58–67.—In this study subjects were given a brief opportunity to examine a task, and then were asked to estimate how much they could do in a three-minute period of time. Later these estimates were checked against actual performance. Six different pencil and paper tasks were presented to 561 school children in grades ranging from fourth to ninth, and to 154 college sophomores. Two laboratory tasks also were estimated by 48 of the sophomores. The results of these experiments are presented in seven tables and a rather detailed discussion. Among the conclusions it is stated that "no clearly demonstrable relationship exists between correctness of estimates and performance," and that the "direction of estimates, i.e., whether over- or under-estimation, is largely determined by the nature of the task estimated."—*B. M. Morrison* (Kansas).

1952. **Fisher, V. E. An experimental study of the effects of tobacco smoking on certain psychophysical functions.** *Comp. Psychol. Monog.*, 1927, **4**, No. 19. Pp. 50.—The purpose of the investigation is three-fold: (1) to ascertain the effects of cigarette smoking upon the Number Work Test of the Johns Hopkins series; (2) to study the effects of cigar smoking by the use of a special apparatus; and (3) to study the effects of tobacco smoking on steadiness as measured by the steadiness plate. The apparatus used in the second experiment on the effects of cigar smoking was devised by Dunlap and is a modification of his "L V N" apparatus which was designed to measure the effects of insufficient oxygen intake in the Air Medical Service during the war. The apparatus for the third experiment on the effects of tobacco smoking on steadiness, was a steadiness plate, in which each hole was divided into four quadrants so that kymograph records could be obtained of movements of the stylus in four directions. The subjects in the first two experiments were three undergraduate men students with ages ranging from 18 to 21 years, all non-smokers, and, in the third experiment, eight male students, comprising four non-smokers, two occasional, and two habitual smokers. The results of the first investigation indicate that the inhalation of from one-third to one-half of an average strength domestic cigarette has no immediate demonstrable effect upon performance in the Number Work Test of the Johns Hopkins series, and that the inhalation of cigarette smoke produces an immediate rise in pulse rate, which varies in amount with different individuals. In the second experiment it was found that the effect of cigar smoking was always in

the direction of greater efficiency of reaction in avoiding both "late" and "wrong" responses. The results of the third experiment indicate that cigar smoking results in a loss of steadiness, as measured by the ability to hold the hand in a given extended position. This loss is more general in a 45-second period, and individual differences become more pronounced in a two-minute period. The effect seems to be more pronounced in general immediately after smoking than 15 minutes later. Some individuals apparently make a fairly ready adaptation to the effects of tobacco smoking on steadiness.—*C. J. Warden* (Columbia).

1953. **Ingalls, N. W. Studies on the femur. III. Effects of maceration and drying in the white and negro.** *Amer. J. Phys. Anthrop.*, 1927, **10**, No. 2.—The present article is a continuation of the study of femoral cartilage which appeared in vol. 9, no. 3, of this journal. The material is identical, consisting of thirty-six pairs of male white femora, ten pairs of male colored, and seven pairs of female colored. The effects of maceration and drying upon the principal femoral measurements, and also the differences between the bone in the recent state and the same bone after maceration and drying, are tabulated both for absolute and percentage alterations. For a part of the material there are data available on the effects of mummification—i.e., drying before maceration—and also in regard to the results of soaking of previously mummified as well as macerated and dried bones. The shrinkage on mummification is complete in two months, but after maceration the shrinkage continues for a much longer time. The two important factors in determining the rate and amount of shrinkage are the water and the organic content of the bones.—*N. W. Ingalls* (Western Reserve). (Courtesy of Wistar Bibliographic Service.)

1954. **Jenkins, T. N. Facilitation and inhibition.** *Arch. Psychol.*, 1926, **13**, No. 86.—The problem was an attempt to determine the effect of irregular presentation and removal of sound upon reaction-time to the appearance and disappearance of light. Reaction-times were measured for three men and two women, 1600 reactions at each sitting, 3200 for two sittings, 400 reactions for each mode of stimulation. The auditory stimulus was produced by an oscillator having wood core inductions, frequency range 8-50,000. The visual stimulus was produced by a monochromatic illuminator. Exposure apparatus was a noiseless pendulum. The subjects reacted alternately to the presentation and removal of light. The auditory stimulus appeared and disappeared irregularly. This procedure gave eight different combinations of stimuli: (1) light and sound, (2) darkness and quiet, (3) light and quiet, (4) darkness and sound, (5) light with the tonal stimulus continuing without change, (6) light with a continuance of quiet, (7) darkness with tonal stimulus continuing without change, (8) darkness with a continuance of quiet. Reaction-times to darkness tend to be shorter than those to light, but the onset of quiet facilitates less than that of sound. Reaction-times for both light and darkness are shorter when the sound continues without change.—*E. M. Achilles* (Columbia).

1955. **Jervell, O. Om bedömmelse av fysisk duelighet ved undersökelse av idrætsmænd.** (On the determination of physical fitness in athletes.) *Tidsskr. f. den Norske Lægeforen.*, 1927, **47**, 165–181.—Until January 1st, 1926, 3845 active male athletes of ages ten to sixty-five, had voluntarily called at the medical office of the Oslo Athletic Society for investigation or advice. 17% of this number were advised either to discontinue sport or to be careful in their training, either on account of organic or chronic diseases or for other valid reasons. The writer gives detailed information from the above material concerning the methods used for physical measurements and medical diagnosis of pulse rate, blood pressure, urine analysis, etc. and warns against any schematic procedure, as each individual case should be given careful attention so that the athlete may be given advice in regard to the kind and amount of sport best suited to his age and con-

stitution. Footnote references, especially to Norwegian literature, but also to French and German, are given.—*M. L. Reymert* (Wittenberg).

1956. **Kelemen, G. Zur Bewertung des von der Körperlage abhängigen Nystagmus and Schwindels.** (An analysis of position-determined nystagmus and dizziness.) *Monatsschr. f. Ohrenhk.*, 1926, **60**, 1156–1161.—Cases are reported in which nystagmus occurs whenever the head is placed in a certain position (1) relative to gravity, and (2) relative to the body. In the latter case compression of the blood vessels supplying the labyrinth seems to be a factor. Tonic reflexes arising from stimulation of the labyrinth and the neck also have an influence.—*C. W. Darrow* (Institute for Juvenile Research).

1957. **Lehman, H. C., & Witty, Paul A. Play activity and school progress.** *J. Educ. Psychol.*, 1927, **18**, 318–326.—By means of the Lehman Play Quiz it was possible to discover the participation of more than six thousand pupils in play activities. It was discovered that as children grow older they decrease in the versatility of their play interests. On the other hand, there seems to be no relationship between progress quotients and versatility of play interests. Progress quotients, which were computed by dividing the mean chronological age of the pupils of a given grade by the chronological age in months of each child in that grade, might be high, low, or average without affecting the number of plays and games in which children were interested. "Pedagogically retarded pupils participated in a considerably larger number of social play activities than did children who had progressed normally in school." Pedagogically accelerated children did not engage in a smaller number of solitary plays and games.—*A. M. Jordan* (North Carolina).

1958. **Monrad-Krohn, G. H. Reflexes of different order elicitable from the abdominal region.** *Arch. Neur. Psychiat.*, 1925, **13**, 750–753.—*D. Shakow* (Boston Psychopathic Hospital).

1959. **Monrad-Krohn, G. H., & Kornfeldt, F. The cremasteric reflex in its relation to the abdominal reflex.** *Arch. Neur. Psychiat.*, 1925, **13**, 490–496.—*D. Shakow* (Boston Psychopathic Hospital).

1960. **Rapport, D., & Katz, L. N. The effect of glycine upon the metabolism of isolated perfused muscle.** *Amer. J. Physiol.*, 1927, **80**, 185–199.—Glycine, one of the amino acids, acts as a powerful stimulator of cell metabolism when added to the blood perfusing the isolated leg of a dog.—*M. J. Zigler* (Wellesley).

1961. **Ross, C. C. An experiment in motivation.** *J. Educ. Psychol.*, 1927, **18**, 337–346.—Three equivalent sections of students were stimulated in different ways in their improvement of a simple motor function—the process of making four lines vertically and one across the four. Group 1 was completely informed of its progress. Members of Group 2 were told whether they were equal to, above, or below the average. Group 3 was left uninformed. There were twelve practice periods. After the tenth period the motive was changed in each group. The completely informed group made 12.6% more improvement than the uninformed group and 8.5% more than the partially informed group. The results differed from those of Book in that the informed group tended to continue its improvement after the stimulus was withdrawn. The influence of motivation was greater for the bright group than for the dull one.—*A. M. Jordan* (North Carolina).

1962. **Schoen, M. Instinct and man (a preliminary note on psychological terminology).** *Psychol. Rev.*, 1927, **34**, 120–125.—The author seeks to answer the question, "What is 'instinct'?" and to banish the grounds for such antagonistic points of view as those represented by McDougall and Watson. Behavior varies for different forms of life; the instinct of the wasp is not the instinct of the bird, and neither is the instinct of the human infant. The difference lies in the degree of variability of the native behavior. In lower forms instinct is

more fixed; in higher, more variable, hence more subject to influence by environment and training. Several troublesome questions are attacked from this point of view: (1) are there any instincts? (2) What is the relationship between instinct and intelligence, intelligence tests and purpose? The suggestion is made that it would be better to eliminate the term "instinct" from psychology and speak, instead, of invariable, variable, and highly variable behavior.—*H. Helson* (Kansas).

1963. **Syk, I. I tonsillektomfragen.** (Remarks on tonsillectomy.) *Svenska Läkartidn.*, 1927, **24**, 288–292.—Discussion of some points in an article by Key-Åberg and of remarks by M. Nordman (250–252).—*M. L. Reymert* (Wittenberg).

1964. **Tiegs, O. W. On the surface tension changes which underline muscular and amoeboid movement.** *Austral. J. Exper. Biol. & Med. Sci.*, 1926, **3**, 1–10.—The author develops the hypothesis that muscular contraction is the result of changes in surface tension, and arrives at the following conclusions: (1) The unit of contraction of a muscle fiber is the sarcomere. (2) The contractile machine consists of two fluids in contact supported within an elastic porous substance, whose cavity communicates by very fine tubes with a collapsible spongework at either end of the sarcomere. When the surface tension between the two fluids is decreased, fluid is forced out of the porous substance, as a result of the elastic recoil of the latter, into the spongework, and the sarcomere thickens at its ends, and therefore shortens; when the tension is again increased, fluid is again drawn into the spongework. (3) The contractile machine works on the same principle as does the capillary electrometer, i.e., by a change in the surface tension of a fluid, accompanying a change in its state of electrification. A mechanism is suggested whereby the lactic acid brings about this electrification; neutralization of the lactic acid by basic creatine abolishes the electrification, and the sarcomere again relaxes. (4) The same principle appears to underlie amoeboid movement in general.—*J. R. Liggett* (Clark).

1965. **Tolman, E. C. The nature of fundamental drives.** *J. Abn. & Soc. Psychol.*, 1926, **20**, 349–358.—The fundamental drives may be divided into two groups, which are called first-order drives and second-order drives. The former (further subdivided into appetites and aversions) are conceived as corresponding to simple physiological needs. The latter are secondary and merely contributory to the first-order drives. Tentatively, first-order drives are listed as: hunger, sex, fatigue demands, excretion demands, sensitive zone demands, on the one hand, and fear and pugnacity on the other. These would ultimately go back to and be definable as the demand for (appetite) or the demand against (aversion) a distinctive physiological condition. A tentative list for the second-order drives would be: curiosity, gregariousness, demand for dominance, demand for submission and imitativeness. Each would be identified not by any specific and simple physiological need but by a gross behavior character. Described in a definite and experimentally controllable fashion, each of these second-order drives would be capable of quantitative measurement and of treatment as a variable whose functional dependence upon the first-order drives and upon differences of early training and environment could be determined experimentally or statistically.—*E. N. Brush* (Boston Psychopathic Hospital).

1966. **Weber, C. O. Simplicity versus adequacy in the definition of instinct.** *J. Phil.*, 1927, **24**, 141–148.—Strange to say, those who deny instinct seem to succeed by certain instinctive logical presuppositions. While the philosophers force realities into *a priori* concepts, scientists endeavor to envisage realities in concepts previously found in sufficiently large numbers. But the mathematician has recently reached the height in deification of concepts. One might suppose that what we cannot conceive cannot exist, and this may be true for the mathematician, who deals in axioms and postulates as the only realities to which mathe-

matical truth can conform. Nevertheless in physics and psychology the method and the object are not one and the same, and phenomena exist regardless of our inability to define them. Peirce tells us that a true prejudice is inescapable, since we would never suspect its existence, and so we refuse to abandon it. And so there are two preconceptions regarding instinct in our speculations, in spite of the fact that they are notorious in the history of thought. The first is this—that the real is enduring and changing; the second, reality must be simple. These two criteria as working tools do not apply themselves. But the persistence of things is only relative. Platonists demand an unchanging eternity, and present day notions show gravest doubt as to unchanging persistence, even of chemical elements. It may be that the alphabet of scientific law can persist. And so, we ask, are instincts unreal because, after years of schooling and effort, they give place to habit? The force of the reality of instincts is found in their resistance, as in the case of inertia in physics. Recent psychologists arrive at the non-existence of instinct not by inference from the facts, but by application of *a priori* principles to the facts; and these axioms are that the real must be simple and it must be persisting. Only the misuse of the principle of simplification is given attention at this time. Due to the labors of animal and comparative psychologists there is at hand a mass of data regarding instincts. As in the case of all vital processes, instincts are notoriously characterized by tendency to trait; their characteristics are only relative, not absolute, and so this violates *a priori* requirements for exact definition. Just as "thunder bolts" could not be understood as long as they were considered partly as a part of electrodynamics and partly as weapons of gods, so instincts, according to behaviorism, must either be mechanical or physiological conceptions, or they must cease to be "real." "Mechanical" is synonymous for "persistent" and "simple"; phenomena so designated must repeat their states, and be incapable of departing from law. But behaviorists often misapply the law of parsimony, as in this case, and confuse simplicity with ease of understanding scientific data. A. P. Weiss is the best example of what not to do in this regard to secure ease by his "postulates." Discussion makes no progress when behaviorism postulates that it will not recognize mental states. But forced simplicity at the start invites difficulty at the end. We must draw on introspection for the labels "fear" or "anger," depend on the objects that arouse them for basis of classification, or trust to luck. Herrick does not propose to secure a forced monism by postulating in advance the insignificance of introspective data. McDougall's account of instincts and emotions would be the correct use of the principle of simplicity. His explanation does not secure a monism, but only preliminary information as to where to look. The goal of science may be synthesis, but we get it finally, not at the beginning.—*T. R. Garth* (Denver).

1967. **Woodworth, R. S. A justification of the concept of instinct.** *J. Abn. & Soc. Psychol.*, 1927, **22**, 3–11.—The considerations advanced in favor of eliminating the concept of instinct are largely irrelevant. The argument that the concept is superfluous because all that is inherited reduces to structure would rule out instinct and habit as well. The argument stressing the impossibility of separating native from acquired behavior is irrelevant, or would necessitate ceasing to speak of acquired behavior as well as native. The fact that an instinct is analyzable into simpler performances applies equally well to other concepts of complex performances. Objections to the "criterion of universality" are valid, but do not really apply to the concept as used by recent psychologists. Allport's argument that the concept does not correspond to any facts of behavior, since the serial integration of the reflexes into any complex performances is always the result of learning, is relevant. Here is a question of fact, with the known facts still fragmentary. Known facts do, however, demonstrate the existence

of a few instincts. Nutritive behavior is an example of an instinct considered as a "serial performance of much regularity, provided as an integrated whole by the native constitution of the individual." Hunger, sleep, and sex behavior are other instances. The difficulty with scrapping instinct is that it is one of a system of interrelated and contrasting concepts, including reflex, emotion and habit, and to eliminate instinct and keep the others would be to force descriptions of behavior into an incomplete and insufficient set of molds. Instinct should be kept or these other concepts should be dropped along with it.—*E. N. Brush* (Boston Psychopathic Hospital).

1968. **Wu, H. Chinese diet in the light of modern knowledge of nutrition.** *Chinese Soc. & Pol. Sci. Rev.*, 1927, **11**, 56–81.—Data are presented to suggest that the present Chinese population are probably stunted in their development by a qualitatively inadequate diet. Economic reasons have favored the predominance of grains and starchy vegetables, with little meat, milk, or fruit. A consequent deficiency of protein and the vitamines may have caused some degeneration, as certain historical records indicate that the ancient Chinese had a better diet as well as a better physique. An improvement is suggested "by increasing the eggs, bean products, green vegetables and fruits, by using slightly milled grains instead of highly refined products, and by improving methods of cooking so as to conserve all the nutrient substances."—*E. Shen* (China Institute in America).

1969. **Wyatt, H. G. The recent anti-instinctivistic attitude in social psychology.** *Psychol. Rev.*, 1927, **34**, 126–132.—The author criticizes the positions held by three writers in social psychology who have declared their rejection of the doctrine of instincts, viz., Allport, Bernard, and Dunlap. "Unless the anti-instinctivists have satisfactory answers to certain questions, it is difficult to escape the happy conclusion to the controversy that they are really instinctivists after all—camouflaged instinctivists, maybe, but why the camouflage?"—*H. Helson* (Kansas).

[See also abstracts 1923, 1971, 1985, 1995, 1997, 2002, 2015, 2021, 2028, 2031, 2043, 2065, 2070.]

PLANT AND ANIMAL BEHAVIOR

1970. **Bingham, H. C. The comparative aspect of McDougall's Outline of Psychology.** *J. Comp. Psychol.*, 1925, **5**, 25–30.—It is contended that McDougall does not do justice to modern animal psychology, and that his presentation of "purposiveness" exclusively in the book ill-adapts the book for use with beginning students.—*H. R. Crosland* (Oregon).

1971. **Cameron, G. R., & Amies, A. B. P. The effect of thyroid feeding on the oestrous cycle of the guinea-pig and mouse.** *Austral. J. Exper. Biol. & Med. Sci.*, 1926, **3**, 37–43.—The experimenters used ten white mice and eighteen guinea-pigs as subjects. Control groups were also used. It was found that the administration of thyroid extract causes in mice an increase in the duration of oestrus and in the length of the whole cycle. In the guinea-pig, there is a marked change in the length of oestrus, but no striking increase in the duration of the cycle. The normal rhythm returned in not over 23 days with both groups of animals.—*J. R. Liggett* (Clark).

1972. **Carr, H. A. The interpretation of the animal mind.** *Psychol. Rev.*, 1927, **34**, 87–106.—At the beginning of the experimental movement in comparative psychology the subjective point of view predominated; this has received criticism from the behaviorists. A point of view may be evaluated from two standpoints: (1) its objective aim and its method of attaining it, and (2) its

value. These are examined in the case of various viewpoints in animal psychology. There follows an examination of the validity of the application of the concept of consciousness to man and animal, with special emphasis on the logical principles involved in making valid inferences concerning the ideational processes in animals. The final conclusion of the author seems to be that a study of the animal consciousness on the basis of similarity with the human by inference can not be stated in any quantitative terms, and hence one can give no statistical statement of the probable validity of his inferences concerning the conscious status of a given species of animal. A person thus has no means of convincing others of the truth of his conclusions.—*H. Helson* (Kansas).

1973. **Jordan, H. Das Apriori bei Tier und Mensch.** (The apriori in animal and man.) *Kantstud.*, 1926, **31**, 527–535.—There are, even in animals, phenomena of synthesis, which are to be interpreted as apriori in the sense that they are capacities of the animal which are independent of the influence of the outer world.—*A. P. Brogan* (Texas).

1974. **Warden, C. J. The historical development of comparative psychology.** *Psychol. Rev.*, 1927, **34**, 57–85.—Five epochs representing the most important stages in the development of comparative psychology are recognized and traced: (1) ancient animal lore; (2) the Greek influence; (3) the early and middle ages; (4) from the sixteenth century to Darwin; (5) the modern experimental movement. The first three epochs are treated in this paper and the other two in a later paper. The first epoch may be summarized as one in which early man carefully observed living nature and portrayed it as a skillful, realistic artisan. Later came domestication of animals. The Greek influence, affecting later Greek and Roman writers, can be summed up in the person and works of Aristotle, whose conception of the animal was teleological and vitalistic. The later writers turned to metaphysical and ethical speculation, which resulted in a sharp dichotomy between man and brute. The third period was one of dearth so far as the investigation of the mental life of animals is concerned, the animal being either ignored or the subject of superstitious beliefs. The revival of Aristotle marked a forward step once more, but in animal psychology, as everywhere else, Aristotle became a source of authority rather than a stimulus for further empirical research.—*H. Helson* (Kansas).

1975. **Warden, C. J. The historical development of comparative psychology.** *Psychol. Rev.*, 1927, **34**, 135–168.—This is the second and concluding paper on the subject indicated by the title, the first having appeared in an earlier issue of the same journal. This article deals with the fourth and fifth epochs in comparative psychology and concludes with a bibliography. The fourth epoch, from the sixteen century to Darwin, taken as a whole, ignored the problems of comparative psychology very largely until the advent of Darwin, although the Cartesian view stirred up considerable discussion. The anecdotal method, anthropomorphism and speculation gradually began to give place to more scientific notions toward the close of the period under the leadership of Lubbock and others. The last epoch, characterized as the modern experimental movement, came in with, or soon after, the theory of evolution, but it was not until the beginning of the last decade of the century that it began to take definite direction as a revolt against the post-Darwinian anecdotal period. Two lines of advance are noticeable: the experimental, led by Thorndike, resulting in laboratory control and collection of quantitative data, and the theoretical, led by Watson, marking the overthrow of metaphysical speculation and anthropomorphic interpretation. A biological or organismic viewpoint has come to be the prevailing one.—*H. Helson* (Kansas).

1976. **Warden, C. J., & Warner, L. H. The development of animal psychology in the United States during the past three decades.** *Psychol. Rev.*,

1927, **34**, 196–205.—Two tables containing information relative to the first courses offered in animal psychology by various institutions throughout the country, and to the animal research laboratories. Several pages of explanatory matter accompany the questionnaire used in gathering the information.—*H. Helson* (Kansas).

1977. **Warner, L. H. A study of sex behavior in the white rat by means of the obstruction method.** *Comp. Psychol. Monog.*, 1927, **4**, No. 22. Pp. 58.—The purpose of the investigation was to study the sex behavior of the normal male and female albino rat to determine the effect upon such behavior of varying the physiological conditions most intimately related to it. Sex behavior was studied by the obstruction method. Physiological changes in the female animal were studied by histological examination of the vaginal secretion in the living animal, while variation in physiological condition in the male was obtained by varying the interval separating the test and the last previous mating. The apparatus used was the obstruction apparatus, which was devised in the Columbia Laboratory and has been described in a recent article. The subjects used were 160 male white rats and 91 female white rats 175 to 196 days old. For the male sex drive, eight groups of 20 animals each were used with seven periods of sex starvation—0, 6 and 12 hours, and 1, 4, 7 and 28 days. Seven groups constituted the experimental series, in which a female in heat was used as the incentive stimulus, and one group the control, in which no incentive stimulus was used. For the female drive, nine groups of animals were used, varying in number from 3 to 22 in a group, with eight types of oestrous condition—early inactive, inactive, late inactive, early congestive, cornified, late cornified, post-ovulative, and recuperative stages. Eight groups constituted the experimental series, in which a male was used as incentive stimulus, and one group the control, in which no incentive stimulus was used. It was found that, with respect to the male drive, the tendency of a male rat to cross an electrical obstruction to a female rat in oestrum is at its low point immediately after a period during which the male has mated frequently with a female in oestrum. Recovery of the tendency from this low point is rapid during the first six hours after such a period of mating, almost as rapid during the second six hours after which it has reached a point only slightly below the maximum manifestation of this tendency, which is found in an animal 24 hours after mating. Slight decrease in the tendency after the first day was found. The data on the female drive reveals a definite relationship between the histological character of the vaginal secretion and behavior toward a sex object. Activity directed toward a male was confined rather rigidly to the period in the oestrous cycle known as oestrum (cornified state). From the standpoint of behavior the onset of oestrum was sudden while its cessation was gradual. In comparing the male and female drives, it was found that the female group showed greater sex activity, but the difference is not statistically reliable. The writer suggests that a reliably greater amount of activity would have been found in the female had the activity of the incentive stimuli of the female group been equated. The behavior data indicated that sex activity is initiated rather more by the external stimulus situation in the male than in the female and rather more by internal stimulation in the female than in the male. The paper includes a review of the literature on the determination of oestrous conditions. Bibliography of 34 titles.—*C. J. Warden* (Columbia).

1978. **Williams, J. A. Experiments with form perception and learning in dogs.** *Comp. Psychol. Monog.*, 1926, **4**, No. 18. Pp. 70.—Three problems are proposed for investigation: (1) the ability of dogs to perceive form, using a square and a circle of the same area and light intensity and horizontally and vertically striped fields; (2) retention in relation to speed of learning in dogs, using discrimination between a square and a circle, discrimination between a

flickering and a steadily lighted circle, and discrimination between an intermittent and a steadily sounding buzzer; and (3) the relative economy of three conditions of distributed practice in maze learning: 12 trials once a day twenty-four hours apart, 6 trials twice a day twelve hours apart, and 3 trials four times a day four hours apart. The apparatus for the first two problems was a modification of the Yerkes Brightness Apparatus and for the third problem a new maze devised by the writer. The runways of the maze were twelve inches wide and had walls of wire screening. There were four of these runways, forming concentric squares around a central compartment which constituted a starting place. Removable doors were placed in the walls and at the ends of the runways, making possible a shifting of problems. Eight diagrams of the maze patterns used are included. The subjects were 13 dogs, 7 of which were used in the first problem, 5 in the second, and 8 in the third. The results of the experiments indicate: (1) that dogs have little ability to discriminate form, 6 dogs failing to discriminate between a circle 6 cm. in diameter and a square of the same area, and one dog failing to discriminate between two striped fields differing only in the direction of the stripes; (2) the longer the period of practice in original learning, the greater the retention when retention was measured by the relearning method, the following correlations between learning and relearning time having been found: $r = -0.48 \pm 16$; $R = -0.73 \pm 0.10$; $\mathring{\rho} = -0.74 \pm 0.09$; (3) distributed practice is more economical than concentrated practice, in the case of dogs learning to run a maze. The writer makes no wide generalization on the basis of the results on retention in relation to duration of learning. Bibliography of 50 titles.—*C. J. Warden* (Columbia).

1979. **Yudkin, A. M. Congenital anophthalmos in a family of albino rats.** *Amer. J. Ophth.*, 1927, **10**, 341–345.—The author reports an instance of congenital absence of the eyeball and optic nerve in a litter of albino rats. The head and brain were peculiarly formed. The body structure of the orbit and the external lids and musculature were normal. No success attended the effort to inbreed the blind animals, although two bore weakly but otherwise normal offspring when bred to non-litter-mate males. Subsequent litters from the original pair were normal in every way. The phenomenon is attributed to arrested growth of the primary optic vesicle by substances—possibly toxins from some infection—introduced from the mother's circulation.—*C. W. Darrow* (Institute for Juvenile Research).

[See also abstracts 1901, 1943, 1945, 1970, 1984.]

EVOLUTION AND HEREDITY

1980. **Cameron, J. Craniometric studies. V. The main angle of cranial flexion. (The nasion-pituitary-basion angle.)** *Amer. J. Phys. Anthrop.*, 1927, **10**, No. 2.—The main angle of cranial flexion exhibits a gradual and progressive diminution in size as we ascend the mammalian scale, and finally reaches its minimum size in the white races of mankind. This angle is an index of the gradual flexion which the basis cranii undergoes as we ascend the mammalian scale, finally culminating in the white races. The first foreshadowings of this cranial flexion are found in the lemurs.—*J. Cameron* (Dalhousie). (Courtesy of Wistar Bibliographic Service.)

1981. **Cameron, J. Craniometric studies. VI. The pituitary-nasion-basion angle. A new cranial angle: its significance in man, the anthropoids, and lower mammals.** *Amer. J. Phys. Anthrop.*, 1927, **10**, No. 2.—This new angle is an index of cranial flexion. It does not exist in lower mammals, and makes its first appearance in the lemurs. It gradually increases in size in the anthropoid

group, and reaches its maximum size in the white races, in which, therefore, cranial flexion likewise reaches its maximum.—*J. Cameron* (Dalhousie). (Courtesy of Wistar Bibliographic Service.)

1982. **Cameron, J. Craniometric studies. VII. The pituitary-basionnasion angle. A new cranial angle: its significance in man, the anthropoids, and lower mammals.** *Amer. J. Phys. Anthrop.*, 1927, **10**, No. 2.—This angle is associated with the pituitary-nasion-basion angle, is like it an index of cranial flexion, and has the same phylogenetic significance.—*R. R. Willoughby* (Clark).

1983. **Cameron, J. Craniometric studies. VIII. The correlation between the pituitary-nasion-basion and the pituitary-basion-nasion angles.** *Amer. J. Phys. Anthrop.*, 1927, **10**, No. 2.—An unusually favorable correlation was found to exist between these two new cranial angles in the American white and the American negro. The female crania yielded more favorable correlations than the male crania in both races, thus suggesting the existence of a sexual factor. The writer is becoming more and more convinced of the fact that sex plays a most important part in determining the configuration of the skull.—*J. Cameron* (Dalhousie). (Courtesy of Wistar Bibliographic Service.)

1984. **McDougall, W. An experiment for the testing of the hypothesis of Lamarck.** *Brit. J. Psychol.* (*Gen Sect.*), 1927, **17**, 267–304.—White rats, of the same original stock, were trained to perform certain tasks. Records were kept of the ability and speed with which successive generations learned the tasks. The two main tasks were (a) escape from a tank of water by way of a dimly lit platform and avoidance of a brightly lit platform; and (b) escape, by swimming and diving, from a maze also in water. Successive generations of rats trained to these tasks showed increased facility in learning. The results point towards the validity of the Lamarckian hypothesis and justify further experiment.—*H. Banister* (Cambridge).

1985. **McMurrich, J. P. The evolution of the human foot.** *Amer. J. Phys. Anthrop.*, 1927, **10**, No. 2.—In the lower mammals there are, as a rule, three contrahentes in the plantar musculature, and the dorsal interossei are arranged with reference to an axis passing through the third metatarsal bone. In man there are no contrahentes, and the dorsal interossei are arranged with reference to an axis passing through the second metatarsal. In the platyrrhine apes and the cercopithecid monkeys the mammalian type persists. In the gibbons the contrahentes are reduced to two, but the dorsal interossei still have the mammalian arrangement. In the chimpanzee only one contrahens has been described, none in the orang and gorilla, while all three genera appear to present sometimes the mammalian and sometimes the human arrangement of the dorsal interossei.—*J. P. McMurrich* (Toronto). (Courtesy of Wistar Bibliographic Service.)

1986. **Morton, D. J. Human origin. Correlation of previous studies of primate feet and posture with other morphologic evidence.** *Amer. J. Phys. Anthrop.*, 1927, **10**, No. 2.—A concept of (1) the phenomenon of man's physical origin and (2) of the subsequent course of human evolution, based upon a correlation of the morphological evidence which testifies to the derivation of the human stock from a Miocene proanthropoid ancestry. Comparative anatomy and prehuman fossil material point toward an erect arboreal dryopithecine type, as representing the common ancestors of the great apes and man. From a zoölogical viewpoint (i.e., taxonomic differentiation by means of anatomical characteristics), "human origin" required an exceedingly long and protracted era of time—not to be confused with a hypothetical point of derivation. The course of man's evolution was evidently characterized by progressive adaptations for erect terrestrial bipedism showing first in the feet and gradually extending upward to involve the entire body frame. Human body form and stature preceded a humanoid expansion of the cranium and brain and the refinement of facial characters.—*D. J. Morton* (Yale). (Courtesy of Wistar Bibliographic Service.)

1987. **Tilney, F. The brain of prehistoric man: a study of the psychologic foundations of human progress.** *Arch. Neur. & Psychiat.*, 1927, **17**, 723–769.—The frontal, parietal, occipital and temporal lobes of several distinct races of primitive men are described with a comment on each, viz., *Pithecanthropus erectus*, the ape-man of Java; Piltdown man, *Eoanthropus dawsoni;* Neanderthal man, *Homo primigenius; Homo rhodesiensis.* In lieu of any survey of the cerebrum of Predmost man, the earliest representative of *Homo sapiens*, analogies from certain of his human contemporaries were drawn. All phases of man's earliest existence are singularly pertinent to modern thought and development. The scotomatous view of human existence loses sight of the preparatory biologic episodes on which our being depends. That there was a definite prehuman stock, a stock capable of producing both anthropoid apes and man, cannot be disputed. But at least five critical and closely interdependent specializations determined the complete status of human differentiation: The appearance (1) of the human brain, (2) of the human foot, (3) of the human hand, (4) of the erect posture with a bipedal locomotion, and (5) of a terrestrial mode of life. The critical expansions in the frontal, parietal and temporal lobes are decisively manlike. From its inception, the cerebrum endowed man with the capacity to develop, inculcate and transmit certain cultural activities. For the most part the human cerebrum is regarded as a finished product. Its evolutionary history does not support this view, but makes it appear far more probable that the brain of modern man represents some intermediate state in the ultimate development of the master organ of life. In this sense the brain of prehistoric man is of more than antiquarian interest; it has a positive bearing on the future progress of the race.—*I. Rappoport* (Boston Psychopathic Hospital).

[See also abstracts 1945, 1979, 2045.]

SPECIAL MENTAL CONDITIONS

1988. **Allen, L. H. The hypnosis scene in "The Tempest."** *Australasian J. Psychol. Philos.*, 1926, **4**, 110–118.—Psychoanalytic analysis.—*S. W. Fernberger* (Pennsylvania).

1989. **Anderson, J. A. The dream as a re-conditioning process.** *J. Abn. & Soc. Psychol.*, 1927, **22**, 21–25.—The case of a little girl, in whom a fear response was set up through an intense and persistent stimulation in the form of a scare by a dog, is here reported. The response was attached specifically to this stimulus, and appeared many times during the ensuing week. A change to another environment where no such stimulation occurred resulted in the disappearance of the response for eleven months. Re-stimulation then brought forth a mild response, which was inhibited by counter stimulation. The emotional response appeared that night in full intensity in the form of a nightmare, after which the reaction was elicited in the waking life of the child by many similar kinds of objects. The strength of the fear reaction is shown by the fact that it was three and a half years before it disappeared. The nightmare is interpreted as a delayed response to the re-stimulation, and hence as a factor in the re-conditioning process.—*E. N. Brush* (Boston Psychopathic Hospital).

1990. **Bagby, E. A compulsion and its motivation.** *J. Abn. & Soc. Psychol.*, 1927, **22**, 8–11.—A case of a hand-biting compulsion is discussed. The symptom operated as a distraction activity, and kept the patient from "thinking about his sin." Repression is held to be an inhibition of thought processes by distraction activity. The particular form of the compulsion had been established by an earlier experience, and when frustrated, new symptoms, in the form of moral doubts, were complained of. Emotional tension was high, but the

original thought process was replaced and emotional transference from the major problem to trifling matters of conduct took place. They also formed a basis for rationalization of conduct. Rationalization is defined as a defense reaction of thought by which there is a reduction of fear tension arising from real or imagined social disapproval or self criticism. The group of reactions ceased when the situation which had been the stimulus ceased to exist, but there remained a tendency to repress moral problems, to which attention was given in the treatment.—*E. N. Brush* (Boston Psychopathic Hospital).

1991. **Bird, G. E. Personality factors in learning.** *Person. J.*, 1927, **6**, 56–59.—Why is it that people of equal intelligence, placed under uniform conditions, may differ widely in their capacity for learning? Personality factors must account for a large share of these differences. The author describes what these factors are and how each influences the power of children to learn. Her remarks have a message for industrial training, for without doubt the same factors operate with small modification among a group of adult learners.—(From *Person J.*)

1992. **Bridges, J. W. A theory of personality.** *J. Abn. & Soc. Psychol.*, 1926, **20**, 362–370.—In the interests of further agreement and greater clarity the writer suggests a view of personality which is summed up as follows: (1) Personality is a psychophysiological concept, that is, it has both mental and physical aspects. (2) Personality is the *sum-total* and the *organization* of correlated mental and physical factors some of which are original and some acquired. (3) Personality has three closely intercorrelated divisions: cognitive, affective, and conative. (4) Each of these divisions undergoes a fundamentally similar type of organization and development which is dependent upon: (a) the existence of cognitive, affective and motor elements, (b) native intelligence or learning capacity, cognitive, affective and motor, and (c) environmental influences, experience, guidance, training. (5) The cognitive organization may be called intellect; the affective, temperament; and the conative or motor, character. (6) These three organizations are more or less closely interrelated throughout all the levels of the hierarchy; and they culminate in *purpose*, which is thus an end-product and not a fundamental category in psychology. (7) Personality may vary with reference to its components, its integration and organization, the relative dominance of its parts, and its mode of expression. (8) Disorders of personality are extreme variations in any of these respects. (9) Any mental or physical disorder is in a sense a disorder of personality, but some disorders are more significant than others. (10) Since the development of personality depends in part upon environmental influences, it behooves education to assist in affective organization as well as in cognitive and motor.—*E. N. Brush* (Boston Psychopathic Hospital).

1993. **Cassity, J. H. Psychological considerations of pedophilia.** *Psychoanal. Rev.*, 1927, **14**, 189–199.—Pedophilia implies an erotic craving for a child of the same or different sex on the part of an adult. The five cases discussed are patients at St. Elizabeth's Hospital, incarcerated there for rape, attempted rape, or carnal knowledge of a minor.—*A. H. Sutherland* (Scarborough School).

1994. **Dearborn, G. V. N. The "two-love question;" an example of unconscious erotic symbolism.** *J. Abn. & Soc. Psychol.*, 1927, **22**, 62–66.—A drawing and passage are here reported, the rather crude but spontaneous expressions of a male patient in the Augusta State Hospital of Maine. They contain a number of symbols and other interesting material, examples of the admixture of religious concepts and sexuality. By way of contrast quotations from poets and philosophers are offered, illustrating the universality of interest in the "two-love question," "divine and profane love," and its importance for philosophy and metaphysics.—*E. N. Brush* (Boston Psychopathic Hospital).

1995. **Downey, J. E. How the psychologist reacts to the distinction "extrovert-introvert" with observations concerning lateralization of function.** *J. Abn. & Soc. Psychol.*, 1926, **20**, 407–415.—The following conclusions may be drawn from a questionnaire on dextrality sent to the members of the American Psychological Association. Of 280 respondents 56.8% were willing to classify themselves as extrovert or introvert. The answers to chosen questions indicated (1) that possibly introverts are somewhat more unstable nervously and emotionally than are extroverts; (2) that introverts are more likely to show lack of harmony between preferred hand and eye than are extroverts; and (3) that introverts are less likely to be highly unilateralized than extroverts. The returns from the questionnaire investigation are indicative rather than conclusive.—*E. N. Brush* (Boston Psychopathic Hospital).

1996. **Earle, M. G. The relation between personality and character traits and intelligence.** *J. Appl. Psychol.*, 1926, **10**, 453–461.—The purpose of this study was to discover whether there is a correlation between general intelligence and personality and character traits in a group of 212 student nurses in seven large hospitals in New York City. The Army Alpha Group Intelligence Test, Form 9, was used to ascertain the general intelligence of the nurses. The personality and character traits, such as cheerfulness and conscientiousness, were rated by three judges from each hospital, including the superintendent and two supervisors. The results obtained are not conclusive. For the seven groups the correlations between intelligence and traits vary from —0.30 to +0.55, four correlations being negative, two low positive, and one fairly high positive. Some of the common criticisms of ratings are pointed out. The author feels that further work along this special line would repay the effort.—*B. M. Morrison* (Kansas).

1997. **Fritz, M. F. The Freudian libido as an incomplete cycle of reflexes.** *Psychol. Rev.*, 1927, **34**, 133–134.—Psychologists object to the more or less mystical force, neurologically unlocalizable, postulated by the Freudians. To relate libido to the nervous system (or rather the facts referred to under the concept), the author says that sex organs liberate products determining lengthy series of reflexes. Ordinarily this series runs to completion. Interruption results in blocking, then a diversion results into other reflex channels. Cycles other than sex cycles may be blocked and diverted and new outlets must be found.—*H. Helson* (Kansas).

1998. **Heidbreder, E. Introversion and extroversion in men and women.** *J. Abn. & Soc. Psychol.*, 1927, **22**, 52–61.—This study has a bearing on the question of sex differences in temperament, and brings out different results from similar studies made previously. The subjects were students at the University of Minnesota, and the instrument of measurement was Freyd's list of 54 introvert traits. The data gathered show that under the conditions of this study there is little or no difference between men and women in introversion and extroversion. Certain sex differences in temperament appeared, aside from the matter of introversion and extroversion. Sex differences in temperament and introvert-extrovert differences did not run parallel to each other, but acted as independent variables.—*E. N. Brush* (Boston Psychopathic Hospital).

1999. **Lorand, A. S. A horse phobia.** *Psychoanal. Rev.*, 1927, **14**, 172–188.—A teacher, 35 years old, came to the physician for a psychoanalysis. This is an account of the interpretations made by the physician in his study of the case.—*A. H. Sutherland* (Scarborough School).

2000. **Prince, W. F. A review of the Margery case.** *Amer. J. Psychol.*, 1926, **37**, 431–441.—*G. J. Rich* (Institute for Juvenile Research).

2001. **Stern, A. Freud's "Inhibition, symptom and anxiety."** *Psychoanal. Rev.*, 1927, **14**, 207–237.—This extended abstract is an attempt to summarize the

main points of Freud's late book and to disclose certain changes in Freud's point of view. It includes a supplement to further indicate the modifications of previously expressed views regarding (1) resistance and countercathexis; (2) anxiety from conversion of libido; (3) repression and defence; (4) a supplementary discussion of anxiety; (5) anxiety, pain and grief. There are four phases of the ego function: (1) sexual; (2) eating; (3) locomotion; (4) inhibition of the ability to work. Inhibitions are limitations of the functions of the ego, making their appearance either as precautionary measures or because of poverty of energy. Symptoms are to be distinguished from inhibitions, being a substitute for repressed impulse-gratification. Repression originates from the ego, which, under command from the super-ego, refuses to join with an impulse arising from the id. Freud cautions against viewing the ego, super-ego and id as distinct entities. There is differentiation only when conflict arises.—*A. H. Sutherland* (Scarborough School).

[See also abstracts 1940, 1971, 2006, 2029, 2030, 2034, 2035, 2039, 2041, 2047.]

NERVOUS AND MENTAL DISORDERS

2002. **Bowman, K. M. Endocrin and biochemical studies in schizophrenia.** *J. Nerv. & Ment. Dis.*, 1927, **65**, 585–604.—(Concluded from previous article.) The findings from special tests do not show consistently the presence of any definite endocrin disorder, but suggest rather that many functional disorders, closely linked with the endocrin system, are frequently found. Therefore schizophrenia seems to be not a specific endocrin disease, but may arise on a number of different bases, except for a constant finding of a low basal metabolic reading. The article is concluded with abstracts of the case histories of the patients used for the special tests.—*E. C. Whitman* (Boston Psychopathic Hospital).

2003. **Davis, L. E., & Cusing, H. Papillomas of the choroid plexus. With the report of six cases.** *Arch. Neur. & Psychiat.*, 1925, **13**, 681–710.—*D. Shakow* (Boston Psychopathic Hospital).

2004. **Dillon, F. The methods of psychotherapy.** *J. Ment. Sci.*, 1925, **71**, 48–59.—Psychotherapy dates back to very early times in the guise of animism and magic of savage culture, but the "trailing clouds of superstition" are in a great measure responsible for the difficulties involving this branch of medicine today. Methods of mental therapy really differ more in detail than in procedure. Three main types can be recognized; suggestion, including persuasion; re-education; and psychoanalysis. These resolve themselves into only two radical methods: abreaction—in the sense of disintegration or elimination of the pathogenic mechanism—and repression. "A compromise between the two is the path of sublimation . . . which is a method of doubtful value. In appropriate cases, analysis, in providing the opportunity for radical abreaction, is the method of preference, but its applicability is decidedly limited. But the methods of repression, suggestion, and persuasion do produce most gratifying results. Re-education is capable of producing both abreaction and strong therapeutic repressing effects, and is the most widely applicable and most valuable form of psychotherapy. It is a rational method of dealing with the affective components of the personality, and not the least part of its value consists in the active co-operation that is required on the part of the patient himself."—*E. F. Symmes* (Boston Psychopathic Hospital).

2005. **Ford, F. R., Crothers, B., & Putnam, M. C. Birth injuries of the central nervous system. Part 1. Cerebral birth injuries and their results (Ford). Part 2. Obstetrical injuries to the spinal cord (Crothers & Putnam).** Baltimore: Williams & Wilkins, 1927. Pp. 220. $4.00.—(Foreword by Adolf

Meyer.) Dr. Ford presents the first steps of an inquiry into the subject of injuries to the brain at birth, with a survey of the literature and of clinical material. Eliminating congenital paralysis, athetosis, epilepsy, and other diseases frequently attributed to birth trauma, he attempts an exact definition of cerebral birth injuries. Crothers and Putnam consider that injuries of the brachial plexus and of the spinal cord are worth investigation from three points of view: (1) They furnish material for the study of physiological disturbances uncomplicated by gross injury of the skeleton or by disease. (2) The problem of treatment and of prognosis demand careful consideration. (3) It is their belief that, almost without exception, injuries of the cord or plexus are due to unphysiological forces imposed upon the foetus. Numerous cases are described and discussed. It is a study of wide appeal to the neurologist, the pediatrician, and the obstetrician.—(From *Anat. Rec.*)

2006. **Hart, B. "The conception of dissociation."** *Brit. J. Med. Psychol.*, 1927, **6**, 241–256.—The aim of the paper (which was the presidential address before the Medical Section of the British Psychological Association in December, 1926) is "to consider the nature of Janet's conception of dissociation and of the subconscious, to elucidate the difference of plane which marks off these conceptions from those created by Freud, and to discuss the relationships and oppositions which exist between them." The first page contains a brief account of the history of efforts to describe the mind by its division into discrete parts. In this connection reference is made to academic psychology, associationism, the writings of Kant, Schopenhauer and Hartmann. The term dissociation in the modern sense was first used by Janet. Several pages are devoted to the description of Janet's conception of dissociation. In general the defects are: (1) that it smatters too much of associationism, (2) that the concept is constructed in spatial metaphor, which is inaccurate. Hart (reviewing his own criticism of Janet's concept published in an earlier paper) adds that instead of regarding dissociation as a splitting of conscious material into separate masses, it must be regarded as an affair of gearing, the various elements of the mental machinery being organized into different functional systems by the throwing in of the appropriate gear. Gordan's notions of engrams and neuronic patterns are cited as a possible physiological explanation of these functional systems and their workings. In distinguishing between the views of Freud and Janet, Hart retains his earlier formulation of their difference, which is briefly that the plane of description employed by Janet in defining the subconscious was phenomenal, that is, it was based upon the observation and consideration of symptoms themselves; that of Freud, in defining the unconscious, was conceptual, his product being an imagined entity created in order to explain phenomenal facts. Hart likewise illustrates the conceptual nature of Freud's ego and id. The same difference in plane (or methodology) results in a difference in attitude in regard to the phenomena of dissociation and multiple personality. He comments on the lack of interest in these subjects in psychoanalytic literature, suggesting a number of possible explanations. There are seven pages containing discussions of the paper by Jones, Mitchell, Glover and Wm. Brown.—*N. Fenton* (Ohio).

2007. **Hassin, G. B. Histopathologic changes in spinal contusion.** *Arch. Neur. & Psychiat.*, 1925, **13**, 369–377.—*D. Shakow* (Boston Psychopathic Hospital).

2008. **Hassin, G. B. The pathogenesis of cerebral hemorrhage: a case of aneurysm of the posterior communicating artery.** *Arch. Neur. & Psychiat.*, 1927, **17**, 770–782.—The case here recorded is remarkable not so much for the clinical as for the pathophysiologic features of cerebral aneurysms, neither of which are sufficiently understood. Intracranial aneurysms are of great academic interest, for they may throw light on certain pathophysiologic phenomena, such

as the genesis and the nature of cerebral hemorrhages. An attempt is made here to follow up the genesis of intracerebral hemorrhages on the basis of existing theories and hypotheses as to the origin of cerebral hemorrhages in general. The conclusions are: (1) An aneurysm of a large artery at the base of the brain was associated with vascular changes in the basal ganglia. (2) A hemorrhage from the ruptured aneurysm was followed by numerous blood extravasations in the ipsilateral basal ganglia. (3) The cause of the hemorrhages in both instances was increased intracranial blood pressure and vascular changes. (4) As the result of the latter the aneurysm ruptured first, causing a local fall in the arterial blood pressure; this in its turn caused a rise in the blood pressure in the corresponding veins and their rupture. (5) The hemorrhages from the veins were thus secondary and agonal; therefore, they were not accompanied by reactive phenomena. (6) Miliary aneurysms are not essential in the genesis of cerebral hemorrhages.—*I. Rappoport* (Boston Psychopathic Hospital).

2009. **Jelliffe, S. E. Postencephalitic respiratory syndromes: phenomenology and pathologic considerations.** *Arch. Neur. & Psychiat.*, 1927, **17**, 627–661.—This study is only a chapter in a larger setting forth of the entire syndrome. A brief citation of the two cases is given. This aspect of the study deals only with the phenomenology of these and related breathing attacks of others, as already abstracted, and with certain somatic pathologic aspects. As the mode of approach is mechanistic and dynamic rather than nosologic and static, such terms as hysterical, degenerate, dementia, psychopathic, neurotic, etc., are of no particular significance. Respiratory disorders are classified into (1) disorders of rate; (2) disorders of rhythm; (3) respiratory ties. No single case of pure respiratory disturbance which does not show one or more of the now accredited "encephalitis" signs has come to notice. If such a respiratory syndrome, "absolutely pure," should be found, "encephalitis" causal factors would not be excluded, but one would be inclined to search psychoanalytically for a characteristic psychogenic goal and hence would ally such a case with the purer hysterias, compulsion, schizoid or other symbolic mechanisms, i.e., nosologically speaking. The breathing attacks, according to most observers, are under some sort of voluntary control. Emotional stimuli are of much moment in inducing or modifying them. Attention is called to the observation concerning the dissociation of many complicated activities in encephalitis during which purely automatic activities such as swallowing, speaking, breathing, etc., seem to be split and become possible only under directed voluntary activity. This feature of functional dissociation is of much significance from the genetic point of view of behavior. The psychoanalytic correlation with an orgasm sialorrhea, or leukorrheal discharge was evident in both cases given as paradigms and will be discussed in the section of this study dealing with psychopathology. The apneic situation is of great psychologic significance, especially when considered from the psychoanalytic point of view of early libido distribution between breathing and sucking in infant. The person with respiratory encephalitis breathes badly with the part of the brain that is functioning. In a negative sense, higher are expression components fall out—temporarily or permanently—and positively, faulty modes of expression occur through the mechanism remaining. It is less the respiratory mechanism per se that is at fault, even though behavioristically most prominent, than what is compelled to function for it as a substitute, but behavioristically unexpressed.—*I. Rappoport* (Boston Psychopathic Hospital).

2010. **Latapie, ——. Remarques sur le secret professionnel dans la pratique de la médecine mentale, vis-à-vis du malade et vis-à-vis des tiers.** (Remarks concerning the professional secret in the practice of mental medicine, from the standpoint of the patient and of others.) *Ann. méd.-psychol.*, 1927, **85**, 97–103.—The difficulties in regard to the discussion of professional secrets are numerous.

The term itself, according to the spirit of recent legislation in France, actually includes not merely what is told to the physician by the patient and his family, but also the facts which the physician gleans from his observations and clinical examination of the patient. Moreover, such secrets have not merely the significance of secrets in relation to a third party, but often also in relation to the patient himself. Certain facts must be kept from the patient, others from his family and his friends. A case in question was that of a woman, mother of a family, who committed suicide on being informed of her diagnosis of syphilis. The author raises the question as to whether the physician in such a case ought not to have sounded out her mental strength before breaking the news to her. If such implications are considered in connection with professional secrets in ordinary medical practice, their disposition becomes especially difficult in neuropsychiatric work. The work of resident physicians at mental hospitals is seriously affected as a result of revelations regarding the patient's condition retold to the patient by members of his family who want, for example, to explain why he is incarcerated and to justify their own inability to get him out of the hospital. Moreover, in legal proceedings when a physician is compelled to testify before the patient regarding the latter's condition he often loses the patient's confidence and trust. Information regarding the mental patient which is given to any one should contain a recommendation regarding the effect upon the patient of its divulgence to him. The physician should be the one to determine the actual disposition of such information.—*N. Fenton* (Ohio).

2011. **Leiner, J. H., & Goodhart, S. P. The infantile type of family amaurotic idiocy: report of two cases.** *Arch. Neur. & Psychiat.*, 1927, **17**, 616–626.—Clinically, both cases presented the typical picture of amaurotic idiocy. Histologically, both differ from most of the infantile cases published by Schaffer and others in the absence of myelin sheath degeneration. In this respect they strongly resemble the juvenile type. In reviewing observations, the authors found in both cases a typical blastodermic (ectodermal) selectivity. The segmental selectivity was not uniform in character; in case 1 the cerebral hemispheres were more involved, in case 2 the cerebellum. As to the systemic electivity, in case 2 the Purkinje cells were mostly involved; in case 1 there was a preference for the deeper layers of the cortex in the process of swelling of the ganglion cells and glia proliferation. The authors state that generalized conclusions from single cases are not justified. In the entire group of infantile types of amaurotic family idiocy there was found a variety of subgroups with mutations in the pathologic pictures. The connecting links in this group are the ectodermal selectivity and the different degrees of Schaffer's type of cell degeneration, which was pointed out and emphasized for the juvenile type by Spielmeyer in 1906.—*I. Rappoport* (Boston Psychopathic Hospital).

2012. **Menninger, W. C. The pupils as an aid to the diagnosis in states of coma.** *J. Nerv. & Ment. Dis.*, 1927, **65**, 553–568.—An analysis was made in 225 cases of complete coma to determine the pupillary status. There were 58 cases of alcoholism, 10 cases of diabetic coma, 8 cases of uremic coma, 46 cases of cerebral hemorrhage, 5 cases of pontine hemorrhage, 43 cases of carbon monoxide poisoning, and 55 cases of fractured skull. It was found that the pupils aid only the diagnosis of comatous states that result from brain trauma. They are of little diagnostic importance in the other comas observed.—*E. C. Whitman* (Boston Psychopathic Hospital).

2013. **Pardee, I. The rôle of syphilis in the Parkinsonian syndrome.** *Arch. Neur. & Psychiat.*, 1927, **17**, 662–669.—The concurrence of the Parkinsonian attitude, facies, tremor, etc., in association with general paralysis should be noted. Diagnosis may be made from signs of neurosyphilis, serologic tests and the gold curve of general paralysis. It seems definitely established that the extrapyra-

midal syndrome is frequently associated with general paralysis. Treatment in this condition seems, from the histologic standpoint, to be hopeless; restoration of the function of the corpus striatum seems beyond even the possibilities of arsphenamine and its associated spirocheticides. A discussion follows.—*I. Rappoport* (Boston Psychopathic Hospital).

2014. **Petry, H. K. The intravenous use of mercuric cyanide in terminal general paralysis.** *Arch. Neur. & Psychiat.*, 1927, **17**, 804–806.—The use of intravenous mercuric cyanide is suggested as a safe, economical and easily administered treatment in hopeless cases of general paralysis that might otherwise remain untreated. It is recommended to contribute toward the physical welfare and comfort of the patients during the terminal period. This method would also seem a satisfactory one for the administration of mercury in any case requiring prolonged treatment with this drug. The dose can be measured accurately and the gastro-intestinal disturbances attendant on administration by mouth, the disagreeable features of inunctions, and the pain of intramuscular injections can be avoided.—*I. Rappoport* (Boston Psychopathic Hospital).

2015. **Proescher, F., & Arkush, A. S. Blood groups in mental diseases.** *J. Nerv. & Ment. Dis.*, 1927, **65**, 569–584.—The discovery of isoagglutinins by Lundstein in 1901 has brought about attempts to find the relations of the blood groups to disease. This report summarizes the findings on the distribution of blood groups in mental diseases. Of the 4 blood groups isoagglutination takes place only with Anti A with *a*, and Anti B with *b*. This is an inheritance of the blood structure according to Mendel's Law. Group specific substances are permanent throughout life for the individual and no change has been successfully demonstrated. Investigators have found present all four groups in every human race, but in different percentage distributions (Ottenberg). This is followed by a description of the technique of agglutination. 1525 cases, from the California state hospitals for the insane, were selected from four groups, dementia praecox, progressive paralysis, depressive mania, and epilepsy. Because of the close correspondence in findings on both male and female cases, separation by sexes is not noted in the tables. There were 64.2% of dementia praecox cases, 10.8% of depressive mania cases, 5.3% of general paresis, and 4.8% of epilepsy. In psychoses, increase in group I by percentage is exactly the same as that in group III, and each is equal to the decrease in group II and to ½ the decrease in group IV. That is, the chances of normal members of blood groups I and III to develop a psychosis is equal and twice as great as for members of group II and four times as great as for members of group IV. It shows also that the distribution of blood groups is constant in mental diseases regardless of the psychosis. Further distribution of blood groups shows that they are constant in mental diseases regardless of the psychosis, and that within each group there is practically a constant distribution of patients among the various psychoses. In general the character of a psychosis is neither determined nor indicated by the blood group, though the susceptibility is so indicated.—*E. C. Whitman* (Boston Psychopathic Hospital).

2016. **Schaller, W. F. Mechanism of compression in a case of tumor of the cerebellopontile angle. Studied by serial sections of the brain.** *Arch. Neur. & Psychiat.*, 1927, **17**, 609–615.—The case reported was of a typical tumor of the acusticus of slow growth which presented a marked cerebellar incoordination but lacked any indications of optic edema, symptoms of intracranial pressure, and facial paralysis. The choroidal changes about the disks may well have resulted from a former papillitis, due to transient fluid block. The compression of the brain stem was not marked, as the tumor extended upward and outward at the expense of the cerebellar hemisphere and the middle cerebellar peduncle. The lack of degeneration in the dentate nucleus, superior peduncle and red nucleus

suggested that the cause of the cerebellar incoordination should be sought elsewhere. The evident cause was found in the degeneration of the middle peduncle and of the restiform body and in the degeneration of the descending vestibular root, both of the latter degenerations being dependent on the unilateral destruction of the vestibular nerve root.—*I. Rappoport* (Boston Psychopathic Hospital).

2017. **Schennmann, A. Zur Pathologie des Einstellungsapparates des Nervensystems.** (Concerning the pathology of the orientation mechanism of the nervous system.) *Monatsschr. f. Ohrenhk.*, 1926, **60**, 1144–1156.—Injury to the otoliths or their attending mechanisms may cause changes in bodily tonus similar to that from extirpation of the labyrinths. The rôle of the otoliths in modifying the reflexes of the eye, neck and trunk relative to the position of the head is discussed. Diagrams show the canals and head viewed from three positions.—*C. W. Darrow* (Institute for Juvenile Research).

2018 **Söderström, M. Om somnifenbehandling vid schizophreni.** (On somnifen treatment in schizophrenia.) *Svenska Lakartidn.*, 1927, **24**, 665–679.—Following the method of treatment of schizophrenia first initiated by J. Kläsi (Zürich) in 1921 by prolonged narcosis through injections of Somnifen (a 10% aqueous solution of diaethylisopropylpropenylbarbiturdisethylamin) the writer presents the results from such treatments of 25 patients in two Swedish hospitals during 1925–1926. The case histories show two cases with beneficial effect lasting for a period of more than six months, some with a short period of improvement and some with absolutely negative results. Some of the general conclusions arrived at are: (1) In dispositions of negativistic antagonism (autism and impulsive outbursts, uncontrollable hallucinations, etc., not connected with dementia, the narcosis may harmonize the patient's affective tendencies very markedly. (2) In serious chronic conditions of agitation in dementia patients with destructive and aggressive tendencies no reaction is apparent. (3) In cases of stupor one may try the narcosis "faute de mieux," and also in restless periods of fear and depression, which are only episodes in a chronic psychosis.—*M. L. Reymert* (Wittenberg).

2019. **Spiller, W. G. Rapidly developing paraplegia associated with carcinoma.** *Arch. Neur. & Psychiat.*, 1925, **13**, 471–478.—A report of two cases.—*D. Shakow* (Boston Psychopathic Hospital).

2020. **Stevenson, G. S. The physiology of the feebleminded.** *Arch. Neur. & Psychiat.*, 1925, **13**, 497–503.—*D. Shakow* (Boston Psychopathic Hospital).

2021. **Tournay, A. Behaviour of the plantar reflex in Jacksonian epilepsy. With some observations on the pathologic physiology of the Babinski sign.** *Arch. Neur. & Psychiat.*, 1925, **13**, 592–595.—*D. Shakow* (Boston Psychopathic Hospital).

2022. **Viets, H. R. Acute polyneuritis with facial diplegia.** *Arch. Neur. & Psychiat.*, 1927, **17**, 794–803.—The two cases of acute infective polyneuritis with facial diplegia, one mild and the other fatal, conform to cases previously reported in the literature as acute febrile, or acute toxic, polyneuritis. The features by which the disease is clinically characterized are mentioned. Facial diplegia is the most characteristic sign of this disease. It is rarely complete, but there is practically always inability to close the eyes. The spinal fluid is altered, at least in the severe and fatal cases. The total protein content may be increased to ten, or more, times normal, without other changes in the fluid. Pathologic examination discloses marked secondary changes (chromatolysis) in the anterior horn cells of the spinal cord and in the facial nerve nuclei. In the one patient examined no meningitis, encephalitis or perivascular infiltration was found. The disease affects the whole lower motor neuron and should more properly be referred to as polyneuronitis. A discussion follows (by Drs. Patrick, Hoppe, Solomon, Taylor and Viets).—*I. Rappoport* (Boston Psychopathic Hospital).

2023. **Villard, H. La simulation de l'amaurose bilaterale.** (The feigning

of bilateral blindness.) *Clin. Ophth.*, 1927, **16**, 82–89.—The majority of observers note that malingering by feigning complete blindness is extremely rare. The writer describes a case and offers tests for its detection: (1) by production of reflex responses by means of a surprise movement toward the patient's eyes, (2) by failure to elicit reflex movements of the eyes in following directed movements of the subject's fingers, (3) by causing convergent movements when one eye is covered by an approaching and receding prism, and (4) by initiating withdrawal of the head and increase in pulse by approaching the nose with a charged electrode.—*C. W. Darrow* (Institute for Juvenile Research).

2024. **Wolff, H. G., & Thomas, E. W. Gastroduodenal ulcers and autonomic imbalance.** *Arch. Neur. & Psychiat.*, 1927, **17**, 571–608.—In spite of the inadequacy of experimental methods for the study of autonomic disturbances in man, certain gross differentiations of clinical syndromes are possible. Anatomic and physiologic peculiarities cause the gastric pathway and the first part of the duodenum to be especially favorable sites for chronic ulcerative processes, once an initial mucosal erosion or hemorrhage has occurred. A review of past experimental observations on the etiology of mucosal erosions shows many of them to be of little value. More recent experiments, performed by electrical stimulation of the vagus with the organs in situ and intact, are of great significance. Under such circumstances, excessive stimulation of the vagus has led to hypertonicity, hyperperistalsis, hypersecretion and mucosal erosions. A group of so-called gastric neuroses has been found to have much evidence of autonomic imbalance, as compared with controls. A group of acute gastroduodenal ulcers has, in a high percentage of cases, shown evidence of autonomic imbalance similar to that of the gastric neuroses. The close relationship of this group of ulcers to the neuroses is thus strongly suggested. Another group of gastroduodenal ulcers has shown little or no evidence of autonomic imbalance. This group gave the usual evidence of chronicity and stenosis. The fact that some advanced chronic ulcers are not associated with more marked autonomic changes indicates that the lesion in the stomach does not in itself give rise to the autonomic alterations. The fact that the most marked autonomic imbalance is found in those cases (gastric neuroses) in which no ulcer can be shown to exist, suggests that the altered autonomic tone may precede the lesion in the stomach. An hypothesis is presented correlating these and other observations. It is possible that central (toxic, mechanical, infectious, psychic, etc.) or peripheral irritation (chronic appendicitis, disease of the biliary tract, etc.) by direct or indirect stimulation of the vagus, may cause a mucosal erosion. The altered autonomic balance may or may not continue, but the mucosal erosion once produced, the anatomic and physiologic peculiarities at the site of the lesion will determine whether or not a chronic gastroduodenal ulcer will occur or whether immediate spontaneous healing will take place. Emphasis is placed on the difficulty of differentiating between early or acute ulcers and certain gastric neuroses. Attention is directed to the presence of autonomic imbalance as an aid in the diagnosis of cases of early ulcer. On the basis of the hypothesis and clinical experience, a few suggestions on therapy are made.—*I. Rappoport* (Boston Psychopathic Hospital).

2025. **Woods, A. H., & Pendleton, L. Fourteen simultaneous cases of an acute degenerative striatal disease.** *Arch. Neur. & Psychiat.*, 1925, **13**, 549–568. —*D. Shakow* (Boston Psychopathic Hospital).

[See also abstracts 1903, 1909, 1910, 1926.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

2026. **Carpenter, N. Immigrants and their children, 1920.** *Census Monog. VII.* Washington: Government Printing Office, 1927. Pp. xvi + 431. $1.50.—

A thorough analysis of the immigration data from the Fourteenth Census, supplemented by reports of other government departments; a veritable mine of information, plentifully embellished with tables, maps, and charts, but so copious and difficult to handle as to its original data that the author admits that few significant generalizations can be drawn from many parts. It is concluded that the original colonial stock is now represented by the equivalent of 45,000,000 individuals, and that the immigrant problem is not more important now than for the last half century; that the place of settlement of the immigrant is not radically different from that of the native white, except that he avoids the South; that it is not true that the "old" immigration sought the rural distracts more than does the "new"; that there is a marked excess of foreign-born males over females, so that matings between the former and native women are to be expected; that "the foreign-born element is encroaching upon the native stock, as regards births, but is much shorter lived than the latter;" that the occupational inclinations of the "old" and "new" groups are probably not markedly different, although the immigrant in any age tends to be forced to the less desirable occupations; and that, in general, the particular ethnic group is the unit indicated for trait studies, not arbitrary groupings such as "old" and "new." It is admitted that "neither this nor any other statistical study provides the material for a full-rounded immigration policy."—*R. R. Willoughby* (Clark).

2027. **Catlin, G. E. G. The like-minded group.** *Phil. Rev.*, 1927, **36**, 237–252.—A theoretically perfect form of society must work without friction. The moral infancy of the mass of humanity justifies the coercive state, which is useful but not ideal. A sound society must permit the grouping of like minds, subject to self-given customs. "To study the growth of such a society, balanced, frictionless, uncoercive, characterized by that parallelism of wills which is the only harmony and 'good condition' which the social physician, as a scientific man, understands, and to learn how to doctor it, when disordered, with a minimal coercive adjustment of behavior, must be the aim of our science of social hygiene, our political science."—*A. P. Brogan* (Texas).

2028. **Cleland, J. B. Blood-grouping of Australian aboriginals.** *Austral. J. Exper. Biol. & Med. Sci.*, 1926, **3**, 33–35.—The author believes that the blood-grouping of the various races suggests that they are composed of varying intermixtures of two sub-species of man. Blood-groupings were made of 101 Australians to see if only one agglutinogen would be found (indicating that they were segregated before the two sub-species intermixed). 55 subjects were found to belong to group II, 46 to group IV (Moss's classification). Groups I and III seem to be absent except when admixtures of foreign races are present. The author concludes that the Australian has a higher biochemical index than even the English. According to this blood-grouping, the Australian is ultra-European.—*J. R. Liggett* (Clark).

2029. **Cushing, H. M., & Ruch, G. M. An investigation of character traits in delinquent girls.** *J. Appl. Psychol.*, 1927, **11**, 1–7.—The purpose of this study was to test the general assumption that delinquents are more suggestible than non-delinquents. A battery of eight character tests (seven adaptations and one original) and the Otis Advanced Intelligence Examination, Form B, were given to a group of girls in the State Training School at Mitchelville, Iowa, and to a group of public school girls (fifty in each of the groups compared). Tables of differences and of correlations are presented. The authors conclude the following: six of the eight tests seem to be worthy of further study; since the intercorrelations are low in general, the tests are discrete from one another; and since the correlation between length of commitment and the results of the tests are low, the undesirable showing of the delinquent girls is not to be explained by unsocial learning after commitment.—*B. M. Morrison* (Kansas).

2030. **Eliot, T. D. The use of psychoanalytic classification in the analysis**

of social **behavior: identification.** *J. Abn. & Soc. Psychol.*, 1927, **22**, 67–81.—A present trend in sociological research is the inductive study of personal histories and analysis of their behavior under social stimuli. The psychiatrists seem to be the group with the deepest insight into personal behavior, and many important contributions to social theory have been made, both by psychiatrists who have seen the sociological bearings of their work, and by sociologists who have interpreted further the social implications of psychiatry. Concepts and terminology have been developed by psychiatrists, many of which are valid in the interpretation of normal phenomena, and are useful in the interpretation of social behavior. Psychiatric analyses should be distinguished from psychiatric analogies, in which an attempt is made to find in the group processes or attitudes analogous to those of the individual. Sociological writers who have employed psychiatric classifications and concepts are mentioned, and the author also comments on the writings of some of the psychiatrists themselves who have essayed social psychological interpretations. A list of the more important psychiatric concepts and mechanisms is given. *Identification* is the process by which the self is recognized, and its limits defined. The process involves *inclusion* and *exclusion*, which are recognized by psychiatrists as *introjection* and *projection*. The ramifications of this concept and its implications for social theory are discussed at length, with numerous illustrations drawn from the social field.—*E. N. Brush* (Boston Psychopathic Hospital.).

2031. **Garth, T. R. Mental fatigue of Indians of nomadic and sedentary tribes.** *J. Appl. Psychol.*, 1926, **10**, 437–452.—The Thorndike Addition Sheets were used in an experiment to investigate mental fatigue in a group of nomadic and in a group of sedentary Indians (each group divided into younger and older). At the end of the experiment each subject was asked to indicate on his work curve tablet the degree of his fatigue. The data are presented in terms of columns attempted and columns accurate. Tables and curves are given. In general the author concludes that the nomadic Indians resist mental fatigue more successfully than do sedentary Indians.—*B. M. Morrison* (Kansas).

2032. **Gault, R. H. On the identification of certain vowel and consonantal elements in words by their tactual qualities and by their visual qualities as seen by the lip reader.** *J. Abn. & Soc. Psychol.*, **22**, 33–39.—A preliminary analysis of the rôle of tactual experiences in addition to the visual experience in lip reading is here reported. One deaf subject was used. The stimuli were monosyllabic words, twenty being presented for lip reading and twenty for lip-touch reading alternately. The data show that tactual experiences, under the conditions of the experiment, do contribute something in addition to what the unaided lip-reader obtains and that something aids greatly in the process of interpreting speech. An analysis of the data is made on the basis of vowel or diphthong plus final consonants, including "clicks." Further experimentation is being carried on. —*E. N. Brush* (Boston Psychopathic Hospital).

2033. **Harris, M. S. The aesthetic theory of Auguste Comte.** *Phil. Rev.*, 1927, **36**, 226–236.—In the *Système de politique positive*, Comte works out a theory of social aesthetics, which has been neglected in the history of aesthetics. —*A. P. Brogan* (Texas).

2034. **Johnson, G. B. Double meaning in the popular negro blues.** *J. Abn. & Soc. Psychol.*, 1927, **22**, 12–20.—After a long acquaintance with negroes and negro songs, the author feels that there is no doubt as to the existence of double meanings, chiefly of a sex nature, in the popular blues songs, and bases his contention upon research into negro vulgar expressions, and the origin and development of the blues. The double meanings found pertain either to the sex organs specifically, to the sex act, or to some other phase of sex life. These expressions are in everyday use among the common negro folk, and so find their way into the everyday songs of the negro adventurer. Some of them have made their ascent

to the realm of decency, and are adopted and altered by song writers enough to be accepted. Many expressions, not being generally known, can be smuggled into songs and invested with passably respectable meanings. The opposition of negro educators and churchmen to the blues is an implicit recognition of the undercurrent of vulgarity running through these songs.—*E. N. Brush* (Boston Psychopathic Hospital).

2035. **Jones, E. The psychology of religion.** *Brit. J. Med. Psychol.*, 1927, **6**, 264–269.—The claim that religious phenomena are within the orbit of science has not yet been conceded generally or even widely. Opposed to the crude notion of the divinely implanted religious faculty is the genetic viewpoint of religious experience. The concept of religion, like that of sexuality, defies complete definition at present. A definition must include the following problems: (1) otherworldliness, the relation to the supernatural, (2) death, (3) pursuit and conservation of values, (4) ideals of ethics and morality, (5) sense of inadequacy in coping with problems of life. The author then makes a brief historical reference to the use of one of these phases of the problem by students of religious phenomena, whom he cites, as the basis for the explanation of the totality of religious experience; and adds Leuba's pluralistic concept of religious origins. Moreover, the attempts to translate religious manifestations into terms of primary emotions and instincts has not met with much better success; he cites a few of these fruitless efforts. Since 1900, a revolutionary concept, stressing the unconscious, has been of service in various attempts by Freud and his followers to throw light on the mysteries of religious experience. The infantile mind, in later life the unconscious, is the key to the solution of the problem of religion; for example, the fear of the awful wrath of God is the adult version of the child's fear of his father. "The outstanding conclusion that emerges from all this investigation is that *the religious life represents a dramatization on a cosmic plane of the emotions, fears and longings which arose in the child's relation to his parents*" (page 267). The author then gives examples, in connection with each of the five categories above, of the implications of this Freudian conclusion.—*N. Fenton* (Ohio).

2036. **Killick, V. Severity of punishment as a deterrent to crime.** *J. Delinq.*, 1927, **11**, 39–45.—More severe and certain punishment is advocated for professional criminals, in order not only to make crime unprofitable but also to create a positive respect for law. The great severity as well as effectiveness of the British system of penalties is mentioned, and the weaknesses of certain of California's criminal laws are exposed.—*H. L. Koch* (Texas).

2037. **Kuhr, V. Aesthetisk opleven og kunstnerisk skaben.** (Esthetic experience and artistic creation.) Copenhagen: Gyldendalske Boghandel, 1927. Pp. 205.—The author, who is professor of philosophy at the University of Copenhagen, in the first chapter (bearing the title of the book) offers a penetrating and critical analysis of both esthetic "experience" (unfortunately the English language has no synonym for the Danish "Oplevelse" or the German "Erlebniss;" the English term *experience* covers the broader German "Erfahrung" only) and artistic creation, arriving, somewhat in line with modern emotionalistic theories of art (Hirn, Hamann, Müller Freienfels, Meumann, Volkelt, Croce), at a personal conception of both esthetic experience and artistic creation, which should be able to give to psychological esthetics the long sought for unitary character. The author's only publication in English, "Esthetic experience and artistic creation" (*Scandinavian Scientific Review*, 1923, II, No. 2, 14–31) will supplement the above chapter. The remaining chapters have the following titles: "Psychological analysis of an esthetic experience" (containing an introspectively critical analysis of the author's experience of listening to a famous singer), "Art as a social-psychological phenomenon," "Psychological mechanism of artistic creation," "Different emotionalistic theories of art." The au-

thor's comprehensive knowledge and viewpoint on psychological esthetics carries him into discussions of ancient and contemporary theories, and throughout the book interesting and valuable inferences are constantly drawn from the rich field of Scandinavian art and literature, so that we frequently meet with Baggesen, Heiberg, Grundtvig, Kierkegaard, Öehlenschläger, I. P. Jacobsen, Brandes, Fröding, Ibsen, Selma Lagerlöf, Johs. Jensen, Strindberg, Jenny Lind, and other northern artists. The book, which is dedicated to Harald Höffding, is furnished with footnote-references, an index of authors and an index of subject matter.—*M. L. Reymert* (Wittenberg).

2038. **Lehman, H. C., & Witty, P. A. The compensatory function of the movies.** *J. Appl. Psychol.*, 1927, **11**, 33–41.—On the basis of data obtained by the administration of the Lehman Play Quiz to more than 6000 children in the public schools of Kansas City, Missouri, the authors conclude that "Going to the Movies" is an activity very much favored by both white and negro children, and that it provides a definitely pleasurable escape mechanism. Tables are presented and references given.—*B. M. Morrison* (Kansas).

2039. **Lindsey, B. B., & Evans, W. The revolt of modern youth.** New York: Boni & Liveright, 1925. Pp. 364.—A study of certain aspects of social life and problems drawn from the judicial experience of Ben B. Lindsey as Judge of Juvenile and Family Court of Denver, Colorado, is contained in typical cases of sex delinquency of modern youth together with treatment of economic, sociological, physiological, and psychological causes of these problems. The solutions of these problems and their correlation with culture and morals, rational thinking, freedom from blind precedent, the psychology of the adolescent, and their relation to the embryonic new society created by modern youth are discussed in these cases of sex delinquency, together with their practicability. The effects of prudery and ignorance of sex upon the lives of adolescents, the culture and morals of conventional society contrasted with those of modern youth, censorship, irrational thinking, and industrial and economic evolution as fundamental factors in creating the revolt of modern youth are amplified in successive chapters. The book contains thirty-three chapters, each of which has adequate subtitles indicative of the content of that chapter.—*R. Williams* (San José).

2040. **Prietze, H. A. Die wissenschaftliche Bewertung von Schädelfunden.** (The scientific value of skulls.) *Mannus: Zsch. f. Vorgesch.*, 1927, **18**, 332–339.—Prietze criticises the study made in Göttingen by Hauschild, who attempted to connect the skulls of primitive man with living types. Prietze thinks that more progress in anthropology would be made by the study of living types than by cranial measurement of men long dead. "There is no certainty that in earlier times the racial characteristics were any clearer than they are now. Romantic acceptance of the racial unity and racial beauty of our ancestors may have a place in poetry, but the scientist will confine himself to everyday facts. If today freedom of travel and great ease in moving about give a mixture of races, in olden time not less so did war, migration and slavery. . . . If we have the whole man before us it will be easier and quicker to find out about his differences than if we have only the naked bones." He amplifies his argument with illustration of the living types around Wurtemberg.—*E. A. Gaw* (Mills).

2041. **Radin, P. [Ed. and tr.] Crashing thunder: the autobiography of an American Indian.** New York and London: Appleton, 1926. Pp. xxv + 202. $2.50.—An untutored Winnebago Indian has put down in his native language for the benefit of his white friend the facts in his life which he himself considered significant. Throughout his entire life there was a consistent seeking for a communion with the spirits, an experience which the Indians were supposed to get in childhood during a period of fasting. During sacred ceremonies he never could feel holy presences; he usually thought of the women he could impress by telling them of his participation in the ceremony. At 45 he went to a religious meeting

and ate peyote to please his family. He describes the immediate unpleasant after-effects and the later image stage at which time he was definitely won over to the peyote religion, "the only holy thing I have become aware of in all my life." The conversion trance is described: he did not need to speak, for he was his own thought; did not need food, for he was his own spirit; no longer needed his body, for his corporeal affairs were over. His interpretation of the actions of those around him at this time is also given. At a later time (also after eating peyote) visions came to him. One was of an object tied up in such a way that it always just missed reaching a beautiful road, at the end of which was a city of indescribable beauty; the object was himself, his fetters his continual thoughts of women. The story of the life of Crashing Thunder's medicine-man brother-in-law is quoted as told by the latter. Among other significant details is the one concerning his last birth (he had been born three times): he seemed to be going outside through the door of a room; as he walked out he was struck by a sudden gust of cold air and cried. Stories heard in childhood are told; they contain obvious wish-fulfillment elements. Besides the above points which perhaps have the most striking bearing on psychology, there are many outwardly unimportant details which might bear examination; illustrative of these are accounts of how he formed the habit of eating fast, and of the beginnings of his desire to make "himself pleasing to the opposite sex."—*M. Goodrie* (Clark).

2042. **Riddle, E. M. Stealing as a form of aggressive behavior.** *J. Abn. & Soc. Psychol.*, 1927, **22**, 40–51.—In this study stealing is considered as a form of aggressive behavior and related to the factors of chronological maturity and mental capacity. The cases used were children examined in the Psychiatric Clinic connected with the Department of Public Welfare in St. Louis. A larger proportion of boys than girls were known to steal, and a larger proportion known not to steal. The question of stealing was left undetermined in a larger proportion of girls' cases. Of children known to steal 34% had I.Q.'s below 70, of those who did not steal 47% were below this level, and in the group in which stealing was undetermined 58% were below 70. The chronological ages of the three groups were about the same, but the mental age of children known to steal was 16 months above that of children who did not steal, and 28 months above that of children about whom no stealing was reported. The differences between their chronological ages were not significant, but the differences between their mental ages were significant.—*E. N. Brush* (Boston Psychopathic Hospital).

2043. **Sheldon, W. H. Social traits and morphologic types.** *Person. J.*, 1927, **6**, 47–55.—Are large men more sociable, more aggressive, better leaders? In the March number of the *J. Person. Res.* the author compared certain bodily measurements with intelligence test scores. In the present article he carries his investigations one step further, comparing these same bodily measurements with ratings on social traits.—(From *Person. J.*)

2044. **Sullivan, E. B. Age, intelligence, and educational achievement of boys entering Whittier State School.** *J. Delinq.*, 1927, **11**, 23–38.—The age, intelligence, and educational achievement of the Whittier School boys are considered in relation to the problems of the intelligent administration of the school—i.e., curricula desirable, effective types of segregation, etc. The educational retardation of the group in regard to mental as well as chronological age is observed, and the probable relationship in many cases between this and the cause of commitment to Whittier is suggested.—*H. L. Koch* (Texas).

2045. **Tait, W. D. Psychology, leadership and democracy.** *J. Abn. & Soc. Psychol.*, 1927, **22**, 26–32.—An aspect of democracy which tends to debar true leadership is the tendency of the representatives of the people to consider themselves not leaders, but mere agents. The individual has become overshadowed by larger groups, and reflection on the importance of the individual in social progress reveals that a new individualism is needed. Mind is the most important

thing in this world, and strong minds depend on strong bodies. The physically stable races survive. Maternalism and undue assistance to the unfit are decried by the author. Misdirected reform and welfare work contribute to national decline. The race is to be saved by cultivating the superior type, and an aristocracy of mind should be the highest ideal of democracy.—*E. N. Brush* (Boston Psychopathic Hospital).

2046. **Tiegs, O. W. The supposed distinction of Australian aboriginals into "straight" and "wavy" haired individuals.** *Austral. J. Exper. Biol. & Med. Sci.*, 1927, **4**, 31–34.—The Panunga-Bultara aboriginals are divided into two exogamous intermarrying moieties; *Gola aradjina* (straight haired) and *Gola luda-luda* (wavy or curly haired). To the ordinary observer there is not the slightest difference to be detected between the two forms, and a native only distinguishes between them, or attempts to do so, after minute examination of individual hairs. The author finds that some hairs have a constant diameter, while others have alternating regions of thickness and thinness, but these differences occur equally in both groups. The author believes that the widespread idea of the aboriginal that he is composed of two distinct races, still recognizable by straight and wavy hair, is a tradition which has descended from a past age, but that the two races have now largely fused. He finds no satisfactory explanation of how the native can detect such slight differences in hair structure, if he does.—*J. R. Liggett* (Clark).

2047. **Young, K. The psychology of hymns.** *J. Abn. & Soc. Psychol.*, 1926, **20**, 391–406.—Religious rituals and ceremonials function to give an outlet for many crude, selfish, or primitive and infantile impulses upon a socially acceptable level. The function of hymns in these religious practices is the object of study in this paper. Nearly three thousand hymns were examined and classified into general categories of appeal. The majority of these hymns were found to deal with infantile return and future reward. Concern with sinfulness and attendant redemption and purification take up somewhat over 16% of the total grouping. Exaltation associated with contemplated futures and redemption is found in over 8% of the total. There is a comparable distribution of struggle and sadistic projection with inferiority feeling and masochistic projection, about 7% in the first set and 8% in the latter. There is a persistent motif of symbolic coordination of unrequited infantile wishes and instincts with adult living. The simple themes, their constant repetition, the use of stereotyped phrases, and, in practice, the use of musical accompaniment, all make for a ceremonial of first-rate significance in stabilizing the personality. Improvement and development in our symbols and religious formulations will, the author believes, grow out of a more adequate unconscious adjustment of our instincts, emotions and intellect to the world of reality.—*E. N. Brush* (Boston Psychopathic Hospital).

[See also abstracts 1891, 1910, 1917, 1927, 1968, 1969, 2059, 2063, 2065, 2066, 2067.]

INDUSTRIAL AND PERSONNEL PROBLEMS

2048. **Adams, H. F. Memory as affected by isolation of material and by repetition.** *J. Appl. Psychol.*, 1927, **11**, 25–32.—The experiment reported here is a modification of Strong's four-dummy experiment. Instead of advertisements, familiar four-letter words were presented in differing sizes of space and at differing frequencies. A group of 50 men and 50 women acted as subjects. Summarizing, it was found that: (1) isolation of a single word upon a page gives it no greater recognition value than is obtained for two or four words to the page; (2) repetition is effective, but when we contrast originals with an original plus one or more repetitions, we find that repetition has an inhibitive effect,

amounting to about 40% for one repetition, 57% for two repetitions, and 64% for three repetitions.—*B. M. Morrison* (Kansas).

2049. **Baridon, F. E. An occupational code: its construction and use with tabulating equipment.** *Person. J.*, 1927, **6**, 29–37.—When tabulating cards are used for studying personnel data, how does one indicate the type of work of each of 40,000 employees? This becomes quite a problem when the men are employed in the many jobs of office, shop, field, and warehouse; when they include executives and laborers of all degrees of skill; when they work with different tools and require different varieties of training. The author describes the solution of this problem in the Western Electric Company by the construction of a suitable numerical code.—(From *Person. J.*)

2050. **Bergen, H. B. Social status of the clerical worker and his permanence on the job.** *J. Appl. Psychol.*, 1927, **11**, 42–46.—An investigation of 211 clerical workers who were hired in a large financial organization in New York City during the year 1923 shows little relationship between social status and permanence on the job. Nor is there any difference in turnover with respect to sex.—*B. M. Morrison* (Kansas).

2051. **Cunliffe, R. B. Whither away and why: trends in choice of vocation in Detroit.** *Person. J.*, 1927, **6**, 25–28.—The author has discovered several interesting trends in choice of careers. Detroit students of high average intelligence are now choosing business as a career, while law is attracting students of lower intelligence. Students of foreign parentage are entering professions which would be closed to them in the old country. This brief article is not only a mine of information, but a source of promising clues for research workers.—(From *Person. J.*)

2052. **Davies, A. E. The training of psychologists.** *J. Abn. & Soc. Psychol.*, 1926, **20**, 344–348.—Continuing Crane's discussion of the matter of standardization of training for psychologists, several points are raised. Since psychology is not yet out of the formless stage it could hardly be expected that agreement could be reached as to the kind of training psychologists should have. A way out might be found if psychology were recognized, like medicine, not as a science, but as a profession, and based on a number of sciences. In this case the question of preparatory study would become urgent. Suggestions are made toward the reorganization of arrangements for pre-psychological training and its relation to the professional course. The importance of the anatomy and physiology of the nervous system and laboratory method in elementary courses for students preparing themselves for psychology as a profession is emphasized. Certain changes in Crane's suggested curriculum are proposed, giving greater weight to neurology, and including physical diagnosis.—*E. N. Brush* (Boston Psychopathic Hospital).

2053. **Dorcus, R. M. Some factors involved in judging personal characteristics.** *J. Appl. Psychol.*, 1926, **10**, 502–521.—Two groups of men and two groups of women were asked to check a list of personal characteristics according to the three degrees, above average, average, and below average, in judgment of themselves and of friends. Further, one group of each sex was asked to rate the characteristics as desirable, undesirable or neutral. A contact pencil was used for checking in order that the time could be measured in fifths of a second. The data are tabulated in detail. It seems to require more time to judge undesirable traits than desirable, and more time to judge friends than selves. The sexes agree generally on the desirability of traits, but women require, on the average, more time for judging than men. Individuals tend to class themselves high with respect to desirable traits and low with respect to undesirable or neutral.—*B. M. Morrison* (Kansas).

2054. **Kornhauser, A. W. A study of four reference report forms.** *Person. J.*, 1927, **6**, 38–46.—The number of letters written each day to references given

by applicants for positions must run into the thousands. Except when coming from the same organization probably no two of these letters ask for the same information, or use the same blanks. No one has made and published a comparative study of the dependability of the information an employer gets by asking for the facts in different ways. In view of this blind adherence to century-old traditional methods and the utter absence of evaluation of results, the personnel research worker here finds plenty of opportunities to exercise his abilities in originating forms of inquiry and evaluating them. This area of investigation is opened up by the author.—(From *Person. J.*)

2055. **Laird, D. A. The psychology of selecting men.** (2d Ed.) New York: McGraw-Hill, 1927. Pp. 345. $4.00.—This book was first published in 1925, as a general introduction to the subject for students and industrial leaders. It contained a critical survey of traditional methods and a description of the scientific methods of selecting personnel. In the present edition four chapters have been added, covering the Limitations of psychological tests, Intelligence tests in guiding applicants, Emotional make-up and job adjustment, and Interests, special abilities, and education. No effort is made to treat each topic exhaustively, but much interesting and useful material is included,—a table of mental age requirements for various occupations, Morgan's Mental Test (for self-administration), the Colgate Personal Inventory (to measure introversion-extroversion), the George Washington University Social Intelligence Test, etc.—*M. Freyd* (Personnel Research Federation).

2056. **Reim, H. Visual acuity and color perception of railway employes.** *Amer. J. Ophth.*, 1927, **10**, 418–421.—A re-examination of 5000 men on one railroad revealed a surprisingly large number of cases of color blindness and other incapacitating visual defects. A periodic examination of all operatives by a procedure eliminating the possibility of learning the tests, the substitution of one man for another, and the influence of unrecognized visual defects of the tester, is desirable.—*C. W. Darrow* (Institute for Juvenile Research).

2057. **Ribsskog, B. Bidrag til evneprøver for snekkerfaget.** (Contributions to tests of aptitude for carpentry.) Skien, Norway: Kroghs Boghandel, 1926. Pp. 26.—Description and standardization of 19 tests of aptitude for manual training and carpentry for the city and trade schools of Skien. The tests were chosen from Richard Arnold's "Beiträge zur Eignungsprüfung für das Tischlergewerbe," but were used with variations in method and procedure. The Spearman correlations between the manual training teacher's estimate of ability and the outcome of the different tests were the criteria for the final selection of tests, which will now be tried on a greater number of pupils in the grade and trade schools. Very slight correlations were found between ability in manual training courses and general scholarship. Reference is also made to: Lipmann and Stern, "Schriften zur Psychologie der Berufseignung und des Wirtschaftslebens."—*M. L. Reymert* (Wittenberg).

2058. **Strong, E. K., Jr., & Laslett, H. R. Further study of want *versus* commodity advertisements.** *J. Appl. Psychol.*, 1927, **11**, 8–24.—This article presents a summary of further study of a problem reported recently in the *J. Appl. Psychol.* This problem concerns the relative effectiveness of "want" and "solution" advertisements. Forty advertisements of twenty articles, one "want" and one "solution" for each article, were used in this investigation. The subjects were 108 men and 18 women from a general psychology class. After the subjects had read the advertisements according to instructions, in order to test their memory of the material, they were given a "recognition of paragraphs" test, a "recognition of sentences" test, and a "recall of trade names" test. From the results of the first two tests named it is shown that copy from "want" advertisements was read 39% more than that from "solution"

or "commodity" advertisements. The results of the trade names test favor the "want" advertisements by 11%.—*B. M. Morrison* (Kansas).

[See also abstracts 2080, 2089, 2090.]

CHILDHOOD AND ADOLESCENCE

2059. **Brill, M. S. Motivation of conduct disorders in boys.** *J. Delinq.*, 1927, **11**, 5–22.—The interrelationships of type of motive, nature of conduct disorder, and I. Q. are considered in 40 cases of habit-clinic children. A greater number of conduct disorders occurred among the 20 dull children of the group than among the 20 bright. More motives were also necessary to cause the bright children to deviate in their behavior from that which is socially acceptable.—*H. L. Koch* (Texas).

2060. **Döring, M. Zur Kasuistik der Kinderaussage und Kinderlüge.** (On the casuistry of the statements of children and the lies of children.) *Pädpsychol. Arbeit.*, 1924, **13**, 215–243.—The work presents sixty designated cases of children's statements and lies. From them in an impressive manner these external and internal factors can be recognized: intercepting, obscuring, repressing, transforming, exaggerating, annexing, inventing; the following taken as a whole also have the effect of "falsifying" the statements of children: defective observation, false meaning, phantasy, suggestibility, anxiety, fear of punishment, desire for revenge, sexuality, hysteria, etc. It is thus a question of the disturbance of the assertive ability and of the consciousness of truth in normal and abnormal children.—*M. Döring* (Leipzig).

2061. **Downey, J. E. Observations on a visually preoccupied child.** *J. Appl. Psychol.*, 1927, **11**, 52–57.—The author reports her observations on a four-year-old boy because of their interesting aspects from three different angles: (1) a rapid rise in I. Q. from 100 to 135 due to stimulating the child; (2) the presence of what appeared to be what is now called "eidetic" imagery; and (3) concurrent with such imagery, as cause or effect, a preoccupation with visual details accompanied by extraordinary proficiency in certain performance tests.—*B. M. Morrison* (Kansas).

2062. **Furfey, P. H. Some factors influencing the selection of boys' chums.** *J. Appl. Psychol.*, 1927, **11**, 47–51.—This study attempts to estimate the influence of seven factors in the choice of companions by preadolescent boys. A group of boys were asked to write down the names of the boys they liked to play with. From the entire group "mutual" pairs of chums were studied, 62 pairs in all comprising 35 different individuals. It was found that association, either at school or in the home neighborhood, seems to be an essential condition for the formation of boys' friendships, and that boys tend to choose chums of the same age, size, intelligence and maturity. The correlations average about +0.31. It is suggested that certain non-intellectual traits may be more important in such choices than those traits measured here.—*B. M. Morrison* (Kansas).

2063. **Graham, V. T. The intelligence of Italian and Jewish children in the habit clinics of the Massachusetts Division of Mental Hygiene.** *J. Abn. & Soc. Psychol.*, 1926, **20**, 371–376.—Data from intelligence tests given in the habit clinics of Massachusetts are presented here, and although the number of cases is rather limited, the consistent trend of the data is significant. Racial classification was by parentage, and it is noted that the Italians and Jews are fairly typical, socially, of those racial groups in Boston and vicinity, while the Americans are not. On both the verbal and non-verbal tests the Jews were found to be superior to the Americans, while the Italians made a poor showing in every respect. The racial relationships proved to be the same when all possible language factors were ruled out, so that the consistent inferiority of the Italians to

the Jews cannot be explained away as a function of language.—*E. N. Brush* (Boston Psychopathic Hospital).

2064. **Jaensch, E. R. Über den Aufbau der Wahrnehmungswelt und ihre Struktur im Jugendalter. Über Gegenwartsaufgaben der Jugendpsychologie (als Schlusswort).** (On the composition of the perceptual world and its structure in youth. On present propositions of child psychology.) *Zsch. f. Psychol.*, 1924, **94**, 38–53.—The concluding remark is at the same time "foreword and introduction" for the contemporary monograph appearing under the foregoing title. Jaensch discusses here the general points of view which he follows in his investigations, from the standpoint of the propositions which the psychology of youth and childhood set for the psychological student today.—*O. Kroh* (Tübingen).

2065. **Lehman, H. C., & Witty, P. A. The negro child's index of more social participation.** *J. Appl. Psychol.*, 1926, **10**, 462–469.—On the basis of data obtained by the administration of the Lehman Play Quiz the authors compare two groups of negro children with two groups of white children with respect to their participation in social or solitary play activities. The per cent of the total activities that the social activities represent is designated the index of social participation. The tables of data indicate that at every age interval ($8\frac{1}{2}$ to $15\frac{1}{2}$) negro children are more social in their play than white children. It is suggested that the negro child's greater sociability may be a handicap rather than an asset as far as a well-balanced development is concerned.—*B. M. Morrison* (Kansas).

2066. **Merrill, M. A. Mental differences in children referred to a psychological clinic.** *J. Appl. Psychol.*, 1926, **10**, 470–486.—This article consists of an interesting analysis of the mental differences in cases that have appeared in the Psychological Clinic of the Santa Clara County Health Center (California) with respect to nationality, social-economic status, educational level, and civil status of parents. The author's summary is an excellent abstract of the article: "Of 467 cases referred to the Psychological Clinic of the Santa Clara County Health Center, 157 or 33.7 per cent fall below I. Q. 70, 180 or 38.6 per cent are mentally retarded, 101 or 21.5 per cent average, while only 29, 6.2 per cent, attain a mental level above I. Q. 110. The foreign group is more retarded than the American group and this inferiority seems to be due to native endowment rather than to inability to handle the language. Of the foreign group the Italians constitute the largest per cent; in proportion to the number of Italians in the county they exceed their quota of the Clinic group by about 30 per cent. In social and economic status as indicated by the Taussig classification into non-competing groups and the Jaffa Budget classification, the American and the foreign groups each show a slight tendency towards positive correlation between status and intelligence. In general the lower the economic status the lower the level of intelligence. Educationally the group is retarded with respect to chronological age and advanced with respect to mental age. The retarded children of the group have been pushed beyond their mental capacity."—*B. M. Morrison* (Kansas).

2067. **Nelles, F. C. California's commission for the study of problem children.** *J. Delinq.*, 1927, **11**, 1–4.—*H. L. Koch* (Texas).

2068. **Winsor, A. L. The relative variability of boys and girls.** *J. Educ. Psychol.*, 1927, **18**, 327–336.—This paper presents a critical review of the literature on the relative variability of boys and girls. It concludes that girls are as variable as boys whenever a large population of a given age has been tested. There is a bibliography of forty-nine titles.—*A. M. Jordan* (North Carolina).

[See also abstracts 1938, 1957, 1961, 1991, 2042, 2044, 2051.]

EDUCATIONAL PSYCHOLOGY

2069. **Anderson, E. J. Measurement in higher education.** *Chinese Soc. & Pol. Sci. Rev.*, 1927, **11**, 240–250.—Reasons are presented to show how the department of education in colleges, through the measurement of results, has a contribution to make to college teaching and administration.—*E. Shen* (China Institute in America).

2070. **Brace, D. K. Measuring motor ability.** New York: Barnes, 1927. Pp. 138. $2.00.—It was the purpose of this study to develop a Scale of Motor Ability Tests. This involved two main problems: (1) discovery of the tests of motor ability and (2) scaling the tests. The final scale of tests includes 20 tests which show the greatest validity and reliability. The first two of these tests are as follows: Test I. Walk a straight line, placing the heel of one foot in front of and against the toe of the other foot. Start with the left foot. Take 10 steps in all, 5 with each foot. Eyes open. Failure consists in (1) losing the balance and stepping out of line; (2) not walking in a straight line; (3) not placing heel to toe. Test II. Stand, jump into the air and clap both feet together once, and land with the feet apart (any distance). Failure consists in landing with the feet touching each other, or failure to clap the feet in the air once. These tests resemble stunts and are either passed or failed. They are meant to measure natural rather than acquired ability. As a group test forty minutes will give ample time for completion. The scale was based on the data from 1,555 students, ranging from fifth grade through college. The test correlates from .70 to .80 with scores on athletic events. Reliability correlations resulting from retesting range from .71 to .90. The scaling technique selected is that of the T scale, thus allowing the Scale of Motor Ability Tests to be expressed in scale scores comparable with scores on other educational tests. Experimental studies in physical education which require the equating of groups of pupils have been greatly handicapped by the lack of standardized tests of general motor ability. The scale of tests proposed in this study would be an invaluable aid in experimental studies using equivalent groups.—*R. Stone* (Clark).

2071. **Buswell, G. T. A personnel study of students who have received the master's degree from the University of Chicago.** *School & Soc.*, 1927, **25**, 730–736.—The following data were obtained from 242 students receiving the master's degree from the University of Chicago between 1924 and 1927: the age of the candidate upon receiving his bachelor's and master's degree, his family responsibility, his father's occupation, his intelligence-test score, the time elapsing between the initiation of his graduate work and the completion of degree requirements, the locus of his residence before and after acquiring the M. A., his years of teaching and administrative experience, his placement and salary following the acquisition of the degree, the amount of his work taken in residence and in the summer school, the expenses incurred through his thesis, and his lot with respect to the above items in relation to his sex. Since the coloring of the group is not that of research workers, the granting of two degrees is suggested—one for advanced work in practice, the other for research accomplishment.—*H. L. Koch* (Texas).

2072. **Charters, W. W. Report of the Curriculum Committee of the National Society of College Teachers of Education.** *Stud. Educ.*, 1926, No. 15, 1–2.—Committee appointed in September, 1924, to summarize principles which should govern the determination of the curriculum for teacher training and to initiate and supervise one or more specialized studies in job analysis within some restricted field of teacher training. It is expected that by October, 1926, a master list of duties and traits of elementary and high school teachers will be available for the profession.—*T. F. Hunt* (Clark).

2073. **Grant, A., & McClusky, F. D. Studies in higher education at Purdue**

University. *School & Soc.*, 1927, **25**, 725–726.—The technique and results of a supervisory system for potentially unfit freshmen as well as of a reclamation program for scholastically delinquent sophomores are briefly described.—*H. L. Koch* (Texas).

2074. **Judd, C. H. Psychological analysis of the fundamentals of arithmetic.** *Sup. Educ. Monog.*, 1927, No. 31. Pp. 121.—An experimental study of counting, using as subjects both college students and elementary school children in grades 1–6. An electric sound hammer, flashes of light, tactual impressions on the back of the hand and other stimuli were employed. Speed was varied, but regular intervals were used throughout. Difficulty was found to increase with the rate of speed and with the length of the series. Light flashes were harder to count than sounds, tactual impressions were still more difficult, while a series of taps made by the subject himself was the easiest of the methods investigated. An analysis of the errors showed that undercounting was distinctly more common than overcounting, regardless of the type of stimulus employed. Marked individual differences in counting ability were found within all groups, and these differences appeared to be related to general ability in dealing with numbers. Children selected by their teachers on the basis of superior class work in arithmetic showed greater facility in counting than those whose class work was inferior. Introspective reports by college students indicated that individual differences in counting are in part the result of differences in the counting methods employed by the subjects. Up to a certain rate of speed persons who utilize sub-vocal counting are usually more accurate than those who do not, but when this rate is exceeded there is a sudden and very rapid drop in accuracy. Persons who are not aware of making use of sub-vocal counting show no such sudden change in accuracy but are generally less accurate throughout. In addition to the experimental data, the monograph includes an analysis of the subject matter of several well known text books in arithmetic and a brief outline of a psychology of arithmetic fundamentals.—*F. L. Goodenough* (Minnesota).

2075. **McKee, P. Teaching spelling by column and context forms.** *J. Educ. Res.*, 1927, **15**, 339–348.—Results show that context exercises are not as efficient as column exercises for teaching spelling and that the context exercises involve a much greater amount of energy for construction and administration.—*S. W. Fernberger* (Pennsylvania).

2076. **Muirhead, J. H. The place of philosophy in American universities.** *Phil. Rev.*, 1927, **36**, 209–215.—In America, philosophy has had a larger place in university work than in Great Britain. This has been due partly to the theological tradition, partly to the influence of such great men as James, Royce, Palmer, Dewey, and Santayana. But there is danger that philosophy will decline under the harmful pressure of popular opinion in American life and under the pressure of excessive specialization. While there is room for specialized work and for criticism, philosophy should be synoptic both in the interpretation of nature and in the study of the meaning of human life.—*A. P. Brogan* (Texas).

2077. **Nash, H. B., & Phillips, M. J. W. A study of the relative value of three methods of teaching high-school chemistry.** *J. Educ. Res.*, 1927, **15**, 371–379.—The three methods used were the pupil method (the pupils were allowed to study as they wished), the combination method (the usual method of teaching chemistry by laboratory, lectures, recitations and demonstrations), and the instructor method (units of work assigned from a text and the pupils never called upon to recite). The results are considered in terms of chronological and mental age of the pupils. The results show that the instructor method is superior to the combination method and that this in turn is superior to the pupil method.—*S. W. Fernberger* (Pennsylvania).

2078. **Odell, C. W. An attempt at predicting success in the freshman year at college.** *School & Soc.*, 1927, **25**, 702–706.—On the basis of data furnished

by 2000 Illinois high-school graduates registered in 100 or more colleges in the state, simple and multiple correlations were computed between college freshman marks in 50 subjects or groups of subjects and marks in similar or related high-school subjects, age, point score on the Otis Self-Administering Test of Mental Ability—Higher Examination, and I. Q. None of the correlations were high, the high-school marks offering, however, a better basis for estimating college success than the other items. The best prediction obtained was 22% better than a pure guess. The author mentions ways of improving our tools for selecting the student personnel of our colleges.—*H. L. Koch* (Texas).

2079. **Thomas, F. W. Principles and technique of teaching.** Boston: Houghton Mifflin, 1927. Pp. xxiv + 410.—This book is designed to fulfil three essentials in an introductory course on teaching practice. The first of these essentials has to do with an organized body of principles which must be derived from the psychology of learning, and should bring together and utilize the pertinent results of such experimental studies as have bearing. The second essential is to familiarize students with the fundamentals of a teaching technique, including an impartial evaluation and interpretation of the various "methods" and "plans" of procedure. The third essential is carefully directed observation and first-hand study of actual teaching.—*P. H. Ewert* (Clark).

2080. **Ward, D. A. Vocational courses and the junior high school.** *School & Soc.*, 1927, **25**, 711–716.—A brief is presented for vocational courses of an exploratory nature in the junior high school. The democracy of such a program is pointed out.—*H. L. Koch* (Texas).

2081. **Watson, G. B. What shall be taught in educational psychology?** *J. Educ. Psychol.*, 1926, **17**, 577–599.—A carefully prepared questionnaire, consisting of fifteen leading topics with several sub-topics under each, was submitted to teachers of education, to teachers of educational psychology, and to undergraduate students with requests to rate the importance of each of the fifteen leading topics. In the rating the sub-topics were not counted, but were included merely for purposes of explaining the main topics. The highest ratings were received by problems of emotion and personality adjustment, problems of original nature and heredity and problems of general teaching method. The lowest ratings were received by the psychology of the acquisition of skill, of home making and pre-school child training, and the various schools and theories in psychology. Educational psychologists rate the problems quite differently from the others.—*A. M. Jordan* (North Carolina).

2082. **Wynne, J. P. Guide to educational and general psychology.** New York: Globe Book Co., 1924. Pp. vii + 85.—Two or more pages of questions, topics for discussion, etc., on each of the important topics of psychology, as conceived by the author following more or less traditional lines. A dozen or more references at the end of each section, and a four-page general bibliography.—*R. R. Willoughby* (Clark).

[See also abstracts 1934, 1938, 1957, 1961, 2051, 2084, 2088, 2090.]

BIOMETRY AND STATISTICS

2083. **Burks, B. S. On the inadequacy of the partial and multiple correlation technique.** *J. Educ. Psychol.*, 1926, **17**, 625–630.—A theoretical discussion of the limitations of the partial and multiple correlation techniques. It is shown that only in one condition out of a possible four is it justifiable to conclude that a factor is made constant by the partial correlation technique. Studies are examined and possible errors are detected.—*A. M. Jordan* (North Carolina).

2084. **Hull, C. L. The correlation coefficient and its prognostic significance.** *J. Educ. Res.*, 1927, **15**, 327–338.—This article considers the relation between ap-

titude tests and the forecasting of grades. A criterion of forecast and an error of forecast are worked out. The author concludes that unless a correlation coefficient between a test and the criterion is at least 0.5 it has no predictive value. Coefficients between 0.5 and 0.6 are characterized as "possibly useful;" between 0.6 and 0.7 "of genuine but limited value;" between 0.7 and 0.8 "of decided value but rarely or never found;" and above 0.8 "not obtained by present methods."—*S. W. Fernberger* (Pennsylvania).

2085. **Neifeld, M. R. A note on some theorems concerning the arithmetic mean and the standard deviation.** *J. Appl. Psychol.*, 1927, **11**, 73–77.—There are presented certain formulas concerning multiplication and dividing factors in the determination of means and standard deviations.—*B. M. Morrison* (Kansas).

2086. **Orleans, J. S. Correlation without plotting.** *J. Educ. Psychol.*, 1927, **18**, 310–317.—A method is presented whereby the coefficient of correlation may be computed without plotting the scores. The formula is derived and an example is given. The correlation is obtained by means of the use of the standard deviations and the differences between scores, which are squared. By means of this method no plotting is necessary and the computation involves only standard deviations and means. For six variables only six distributions would be necessary and fifteen distributions of differences between each pair of variables.—*A. M. Jordan* (North Carolina).

2087. **Thurstone, L. L. Equally often noticed differences.** *J. Educ. Psychol.*, 1927, **18**, 289–293.—The theorem of equally often noticed differences is critically examined. It is shown that equally often noticed differences are not always equal, not even psychologically, but are equal only under certain conditions. These conditions are that the amount of dispersion in each sample shall be equal to that in every other sample considered. It is further proved that equal psychological differences are equally often noticed only when the discriminal dispersions of the specimens are equal.—*A. M. Jordan* (North Carolina).

[See also abstracts 2049, 2054.]

MENTAL TESTS

2088. **Cleeton, G. U. The predictive value of certain measures of ability in college freshmen.** *J. Educ. Res.*, 1927, **15**, 357–370.—Results of the Thorndike Intelligence Examination given to college freshmen were compared with the grades obtained by these students in pre-engineering work. The results show that the correlation is not highly significant if close limits of prediction are demanded. The parts of the Thorndike examination do not predict success in pre-engineering courses as well as the total examination.—*S. W. Fernberger* (Pennsylvania).

2089. **Hubbard, R. M. The reliability of Freyd's interest analysis blank.** *J. Educ. Psychol.*, 1926, **17**, 617–624.—Freyd's interest analysis blank was given at intervals of six weeks and a year to 441 freshman men and 506 freshman women in order to determine the instrument's reliability. The coefficient of correlation between two administrations of the tests six weeks apart was, for men, .52; for women, .47. The corresponding figures for the year interval were .64 and .49. These coefficients are raised considerably by correction for range. Furthermore, individuals did not change their scores to any very large extent during the intervals studied. The extreme scores remained unusually stable. The blank is regarded as sufficiently reliable to warrant further use and study. —*A. M. Jordan* (North Carolina).

2090. **Keane, F. L., & O'Connor, J. A measure of mechanical aptitude.** *Person. J.*, 1927, **6**, 15–24.—Reliable measures of specific abilities and aptitudes are greatly needed in any scientific vocational guidance procedure. The authors here describe a method of measuring mechanical aptitude by means of a large block jigsawed into nine pieces. The time required to fit these pieces together

is found to be a good indicator of innate mechanical aptitude, and evidence is shown of the value of the block in vocational guidance and in selecting and placing factory workers. Engineers, mechanics, and draftsmen show considerable superiority over a group of unselected workers. This measure is at present in successful use in the West Lynn Works of the General Electric Company.—(From *Person. J.*)

2091. **Pintner, R. An empirical view of intelligence.** *J. Educ. Psychol.*, 1926, **17**, 608–616.—The best method by which to gain an understanding of the meaning of intelligence is to approach it from the standpoint of behavioristic psychology. Any type of response under certain conditions may be used as an indication of intelligence: walking, drawing a square, talking, etc. Now these conditions are that the individuals shall have had *similar* previous experiences in the function to be measured. School subjects might be used as measures of intelligence if we knew that the previous experiences of the children with them were comparable. On the other hand, unless the previous experiences have been similar, no type of response can be used as a basis of comparison; e.g., the Stanford-Binet was standardized on American children in whose homes English was spoken, and it would be manifestly unscientific to evaluate by such an instrument the intelligence of Italian children living in this country. Therefore, no particular test is a measure of intelligence under all conditions.—*A. M. Jordan* (North Carolina).

2092. **Poull, L. E. Clinical values of the Rhode Island Intelligence Test and the Town Picture Game.** *J. Appl. Psychol.*, 1927, **11**, 68–72.—On the basis of an investigation made on a group of children from the Children's Hospital, Randall's Island, New York City, the author justifies the use of the Rhode Island Intelligence Test and the Town Picture Game as alternates to the Stanford-Binet in the classification and adjustment of mental defectives.—*B. M. Morrison* (Kansas).

2093. **Slocombe, C. S. The measurement of intelligence.** *J. Educ. Psychol.*, 1926, **17**, 600–607.—Spearman's function g, or general intelligence, is accepted by the writer. Nine American tests are then measured against this factor. The degree that each test includes this factor is called the "intellective saturation." Terman Group A, Army Alpha, and Pressey Senior Classification seem to have the highest degree of intellective saturation. The correlation of a combination of the five tests best in this respect with g is about .98; but even this proximity to perfection in correlation has an error of about 10 per cent in either direction. Methods are suggested whereby definite improvement in tests could be brought about.—*A. M. Jordan* (North Carolina).

2094. **Stoddard, G. D., & Ruch, G. M. Ratings of Downey Will-Temperament traits.** *J. Appl. Psychol.*, 1926, **10**, 421–426.—The Downey Will-Temperament Test was given to two groups of college students, one of 24 men in one fraternity, and the other of 30 women in one sorority. Several weeks later each subject was asked to rate himself or herself and his or her two roommates with respect to the twelve Downey traits, which were carefully explained on the basis of Downey's work. Profiles were then constructed which were presented later in groups to each subject for him to select those representing himself and one of his two roommates. Only three subjects succeeded in making these choices correctly, which is shown to be less than could be expected according to chance. None of the traits shows a significant correlation of test scores with ratings, but in seven traits the students' ratings agree to a considerable degree, and these ratings tend to be consistent. Although the results of the study are negative, they are considered to be significant for reasons that are stated in the article. Explanations of the traits and the rating form are included.—*B. M. Morrison* (Kansas).

[See also abstracts 1928, 1996, 2029, 2044, 2059, 2063, 2066, 2068, 2069, 2070, 2078, 2084.]